G2 AFV

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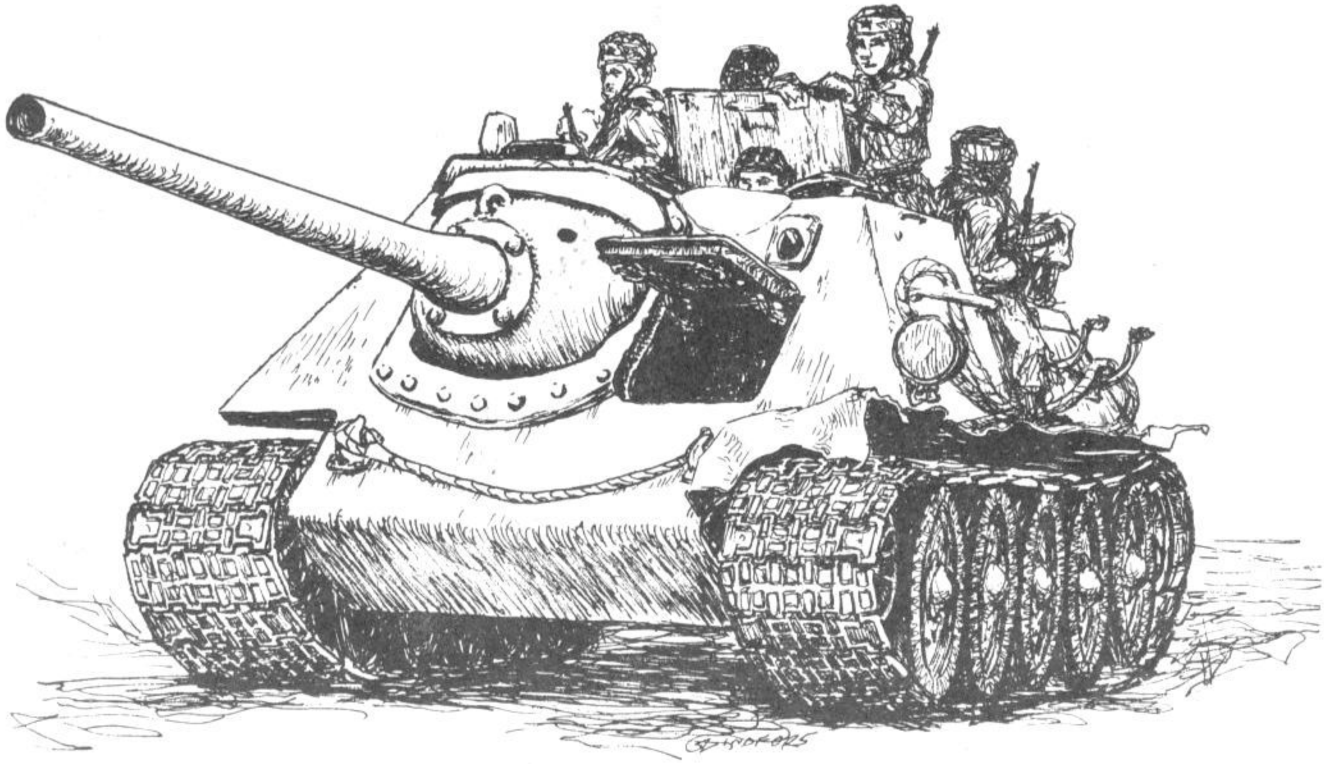

The AFV-G2 is a magazine, published monthly, for Armor Enthusiasts, with the purpose of gathering and disseminating information about Armored Fighting Vehicles and their employment; to provide an opportunity for persons seriously interested in the History of Armored Fighting Vehicles, in the modeling of these AFV's and associated equipment, and in the playing of military Wargames utilizing miniature AFV's, to share ideas and items of mutual interest, and to promote an interest and awareness in the subject of AFV's.

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COVER: Following the theme of our feature article this month on the family of Soviet Self-Propelled Anti-Tank Guns, this month's cover, by Gunnar Lindfors, is a pen-and-ink study of the Soviet SU-85, which effectively countered German Panzers from 1943 to 1945, and was the mainstay of Soviet mobile antitank warfare.

Soviet Self-Propelled Anti-Tank Guns

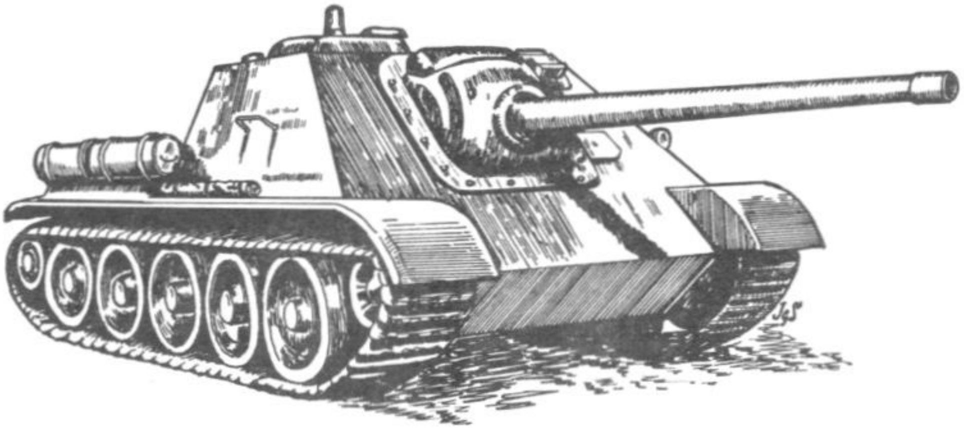
by W. Larson

Soviet Self-propelled guns were introduced in the Red Army as a direct result of experiencies obtained from the German Army in 1941-42, when German Panzers and Sturmgeschütz III.'s set the standards for future Soviet offensive warfare. The German assault guns in particular, gave an illustration of how effective anti-tank guns, of larger caliber than the original tank guns, could be mounted on tank chassis that were often obsolete. The Soviet family of assault guns, some designed for anti-tank work, and some as self-propelled artillery, were based on the experiences obtained at considerable cost.

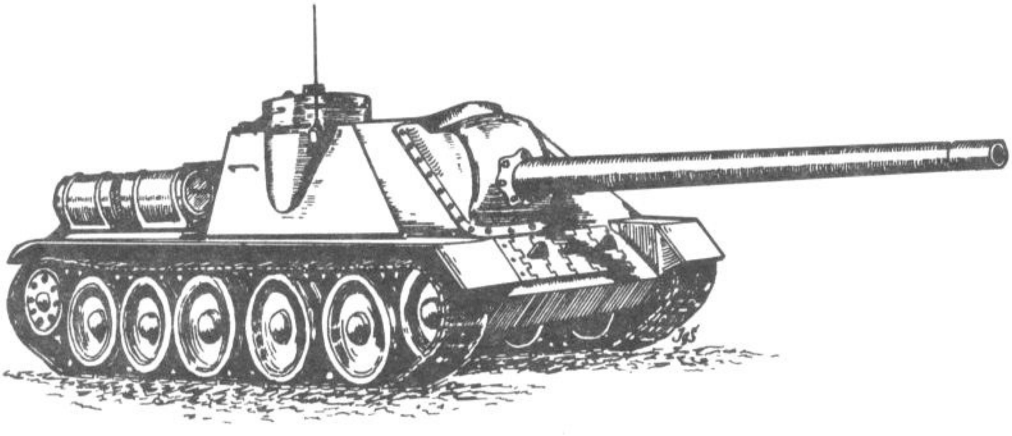
It is important to realize that, with the exception of the early SU-37 and SU-76, the Soviet assault guns were actually heavily armored assault weapons, rather than tracked platforms for field artillery. They were well able to exist on the battlefield in the face of anti-tank opposition. Since they consisted merely of modifications of the standard field, anti-tank, or antiaircraft guns, the self-propelled guns had the same ballistic characteristics as the original weapons (except for more limited elevations and deflections) and the same automotive performance as the original vehicles.

The early SU-76 assault gun was an adaption of the 76mm divisional M1942 gun, otherwise known as the ZIS-3, mounted on the modified chassis of the obsolete T-70 light tank. It first appeared in late 1942 as a temporary solution to the urgent requirements for self-propelled weapons, and it was soon replaced by more effective vehicles in armored units. The limited elevation on the carriage limited the maximum effective range of the gun, and the increasing armor thickness of German tanks, plus the thinness of its own armor, soon relegated the SU-76 to infantry support work. It continued in this role through 1945, and also was employed in many "satelite" armies equipped with Soviet equipment. A number of SU-76's saw combat in Korea in 1950-51. The engines in the SU-76 consisted of two 6-cylinder gasoline units producing 140 horsepower each. The SU-76 had a speed of 28 m.p.h. and a maximum range of 225 miles.

The first really effective Soviet assault gun was the SU-85, which was also the first effort to merge the T-34 tank chassis with a highly effective anti-tank gun. The chassis of the T-34 tank was little changed with the exception of the superstructural changes, consisting of the deletion of the turret and the armament, and the addition of a built-up box-like superstructure on the front portion of the hull which continued the angled slope of the front plates. The vehicle was powered by a 493 horsepower V-12 engine that was simple to maintain. This diesel engine gave a speed of 35 m.p.h. and a range of 185 miles with the standard internal fuel supply. This supply could be augmented by the addition of four drums of diesel fuel to brackets on the rear deck of the vehicle. The SU-85 mounted a highly effective adaption of the D5-S85 (or later D5-S85A) Model 1939 antiaircraft gun, which fired an eleven-pound HVAP (High Velocity Armor Piercing) projectile at a muzzle velocity of 3380 feet per second, to a maximum range of 17,000 meters. This projectile could penetrate 130mm (or 5.1 inches) of armor at zero degrees, at a range of 1000 meters; with the more conventional AP (or solid shot) projectile fired at a muzzle velocity of 2625 f.p.s., the penetration was 102mm (or 4.02 inches) of armor at the same angle and range. The SU-85 carried 48 rounds of ammunition. The above penetration was more than adequate to destroy practically all of the opposing German armored vehicles at normal combat ranges.

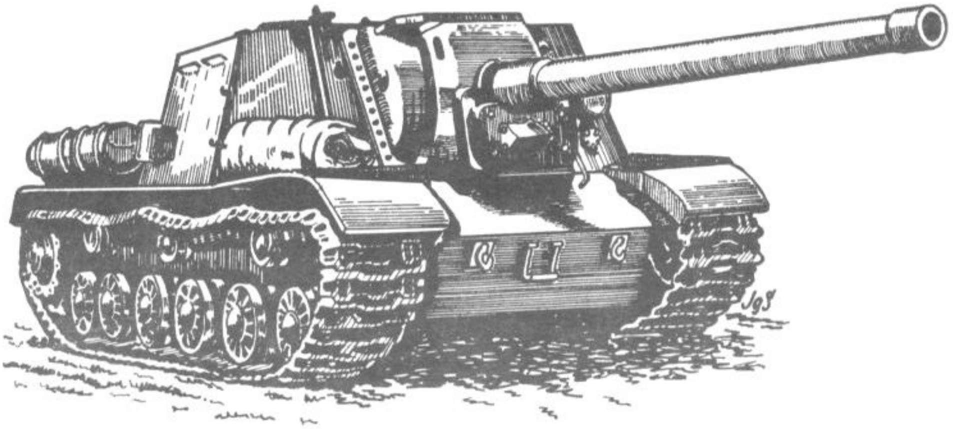


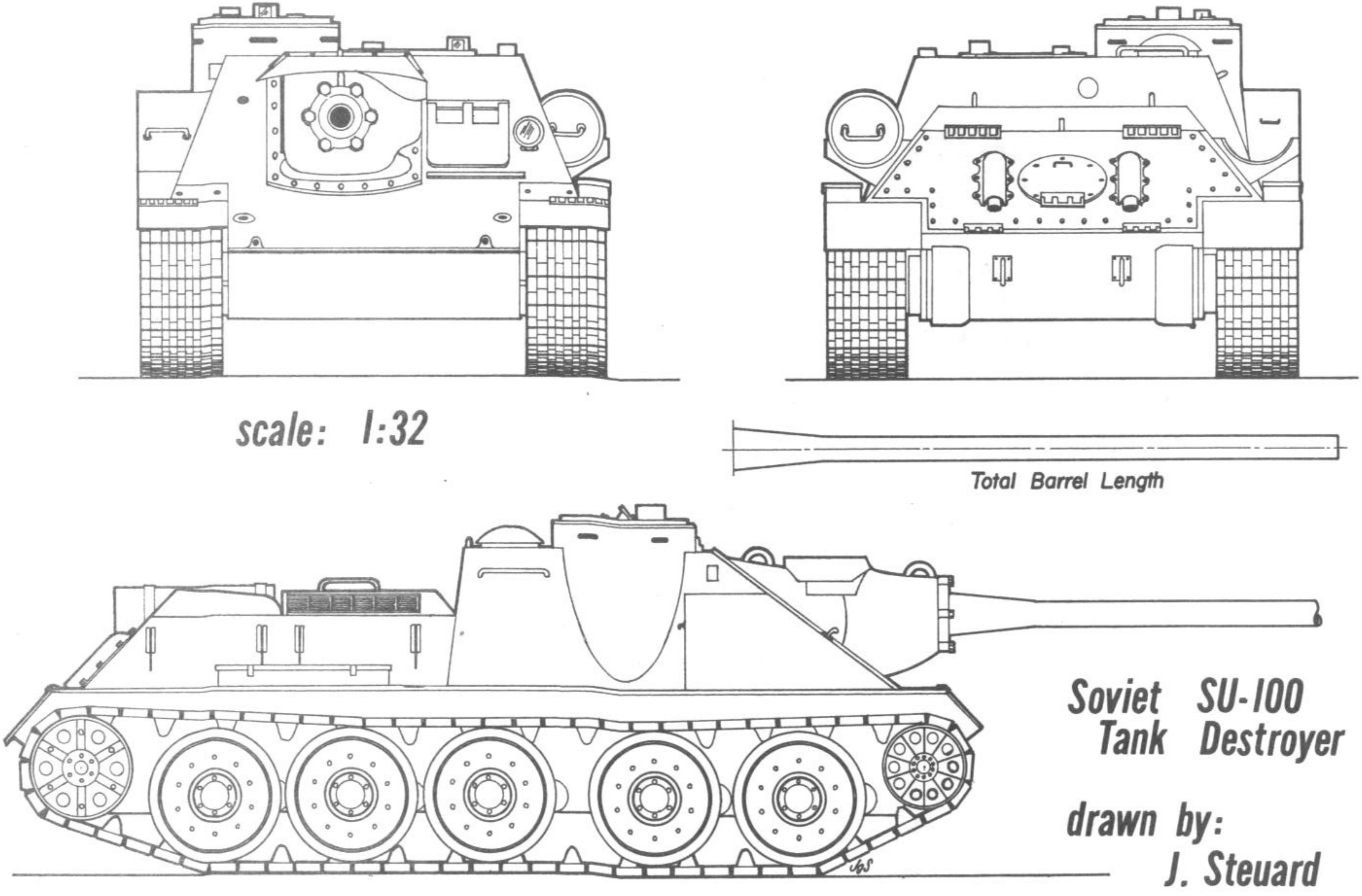
In 1944, the T-34/85 tank, which mounted the same 85mm gun as the SU-85, began to replace the earlier T-34 with 76mm gun. The new T-34/85 immediately made the SU-85 obsolete, as it offered the advantages of a turret over the fixed armament of the SU-85. Soviet designers were thus forced to consider revisions to update the SU-85 into a more effective and modern vehicle. The eventual result was the powerful SU-100 self-propelled gun.



The SU-100 assault gun first made its appearance in late 1944 or early 1945 in the combat against the reatreating German Army. It mounted an adaption of the 100mm D-10S Model 1944 anti-tank gun, which is the same gun that was later mounted on the T-54 tank. The high performance of the 100mm gun, coupled with the excellent mobility and well designed armor of the carriage made the SU-100 a most significant vehicle. This 100mm main weapon fires a 22.5 pound HVAP projectile at a muzzle velocity of 3281 feet per second, and a more conventional AP-HE-T (or Armor-Piercing High-Explosive Tracer) projectile, weighing 34.6 pounds, at 3018 f.p.s. muzzle velocity. The HVAP projectile can penetrate 9.8 inches of armor at zero degrees, at 1000 meters range, while the AP-HE-T projectile can handle 6.77 inches of armor at the same angle and range. This gun allowed Russian crews to engage German tanks at longer ranges and be assured of complete penetration. The SU-100 used the tried-and-true T-34 chassis and modified superstructure of the SU-85, which included a commander's cupola. The vehicle carried 34 rounds of ammunition. The SU-100 continued in service after World War II., being finally obsoleted by the T-54 tank which mounted a 100mm gun in a turret. The SU-100 is still in use with the Soviet Army as a training vehicle, and it serves in front line use in a number of "satelite" nations, including those of the Middle East, where it saw combat in the 1967 war between Israel and Egypt.

The Soviet Army in World War II. also used the chassis of the KV series of heavy tanks as mounts for self-propelled weapons. When the KV series evolved into the JS (or Josef Stalin) tanks, it was logical to use a larger caliber weapon on this chassis in a similar manner to the other SU's. The resulting vehicle used the powerful 122mm Corps Gun Model 1931/37 modified to fit in the chassis; this gun was otherwise known as the A-19S. The well-tested JS tank chassis was powered by a 512 horsepower V-12 diesel engine that was simple and robust. It propelled the vehicle at a speed of 23 m.p.h. with a range of 112 miles on the internal fuel supply. The usual supplemental fuel drums were often carried on the rear deck to extend this short range. The 122mm main armament was a dual purpose weapon which could be used either as artillery or anti-tank, firing a HEAT (High Explosive Anti-Tank) projectile at 2625 f.p.s. muzzle velocity. This projectile could penetrate 188mm (or 7.0 inches) of armor at 1000 meters range at zero degrees of slope There was also a later version of the JSU-122, (the A) which mounted the later D-25S tank gun, which can easily be recognized by the double-baffle muzzle brake. The JSU-122 served in the Red Army until the mid-1950's, when it was supplemented by the T-10 heavy tank, and later T-62.





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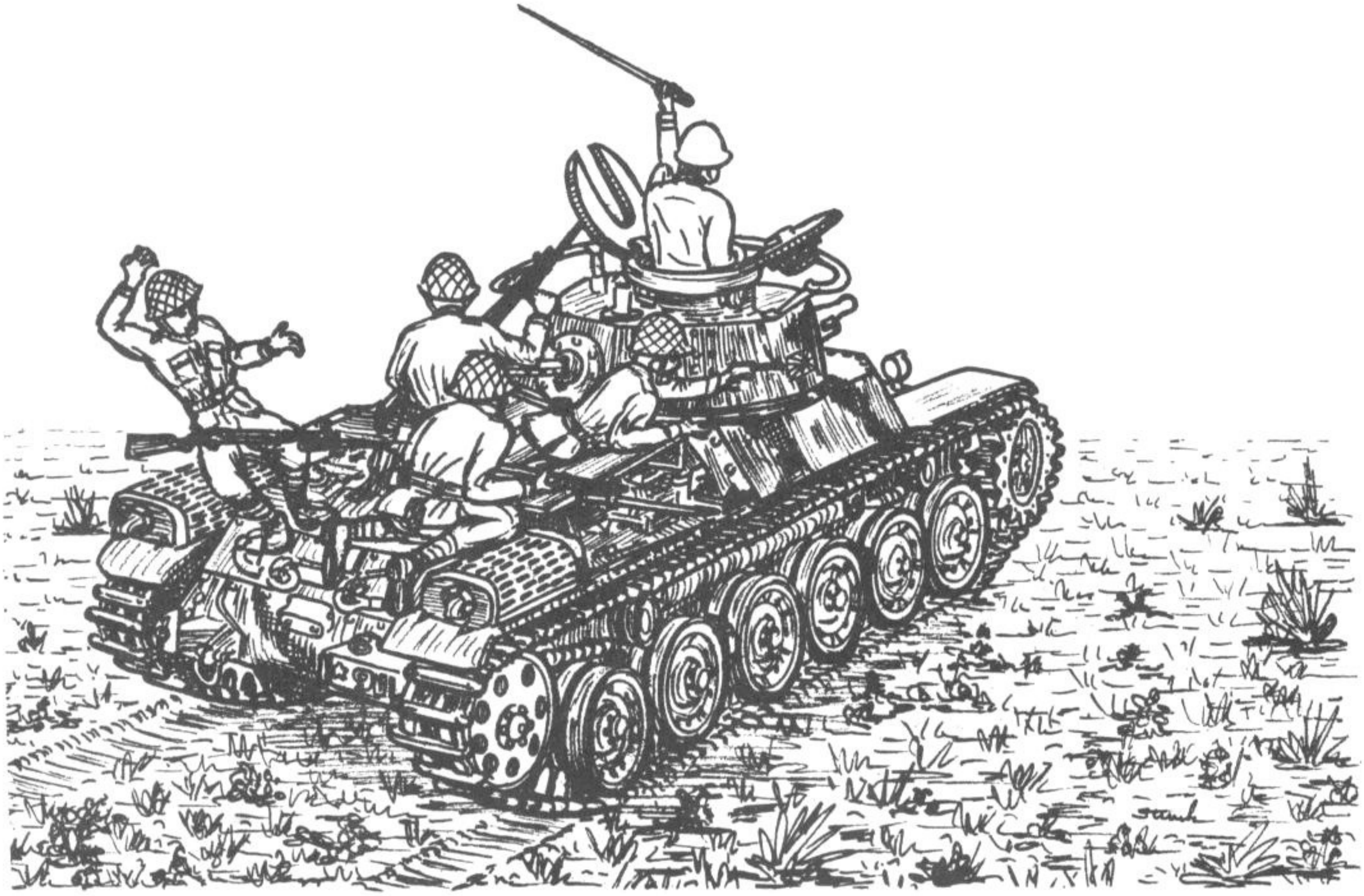
Soviet SU-100
Tank Destroyer

drawn by:
J. Steuard



Banzai Tank Attack

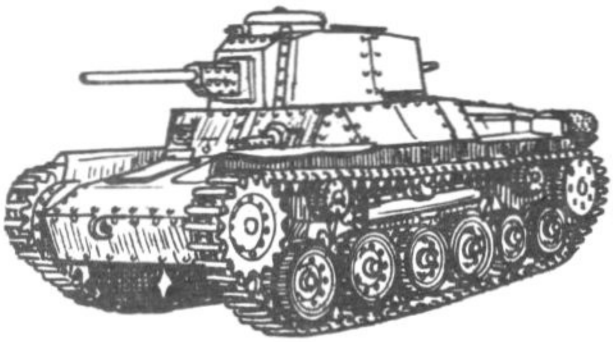
by Joe Struck

The first large Japanese tank attack of the Pacific war was made by the 9th Tank Regiment on Saipan. In mid-1944, Saipan was the biggest and most important amphibious target that the US Marines had yet assaulted. The island and the rest of the Marianas were the center of the Japanese island defense system, and capture would put US B-29 Superfortresses within bombing range of Japan. The Japanese 9th Tank Regiment was a part of the 30,000 defenders on Saipan.

On June 15th, the Second and Fourth Marine Divisions landed on Saipan. During the first half-hour, more than 700 Amtracks carried 8000 Marines ashore through the heaviest and deadliest artillery fire that the Marines had encountered. The 4th Tank Company of the Japanese 9th Tank Regiment had been ordered to defend the beaches, but had been driven back by the heavy naval gunfire and massive Marine assault. The Japanese troops and tankmen stubbornly resisted the Marine advance. Japanese artillery lashed the beachhead all day, and US Marine aid stations were crowded with casualties. There were plenty of targets; 20,000 Marines were ashore by nightfall. From dark until dawn, the Japanese counterattacked the beachhead perimeter. The 4th Tank Company attacked twice with the infantry, and both were cut to pieces. Daylight revealed wrecked Japanese tanks and more than 700 bodies. Only three of the 4th Company's fourteen tanks survived the fighting and rejoined the 9th Tank Regiment which had moved across the island from their reserve position. The Marines were still holding what they had seized on D-Day, and they continued to gain more ground the next day.

Vice-Admiral Nagumo, former Commander of the Carrier Force used at Pearl Harbor, Midway and other important carrier battles, relayed to Lt. General Saito, Saipan's commander, the first good news that he had received since the invasion had started. The Japanese combined fleet was on its way to destroy the American naval and air forces that were overpowering the defenders With help on the way, Saito jubilantly ordered the 9th Tank Regiment, supported by the 136th Infantry Regiment, to annihilate the Marine front lines, and drive into the beachhead. Gen. Saito awarded Admiral Nagumo the honor of personally leading the Japanese attack, which would be the first large Japanese tank attack of the war. Nagumo did not show up to exercise this honor, and Colonel Hideki Goto, Commander of the 9th Tank Regiment, took charge of the attack.

The 9th Tank Regiment had only 44 of its 90 tanks: six Headquarters tanks, fourteen of the 3rd Company, the three remaining tanks of the 4th Company, fourteen of the 5th Company, and seven, or half, of the 6th Company. The 1st and 2nd Companies and half of the 6th Company were on Guam. The six Tank Companies were organized with eleven medium and three light tanks. The Regiment was equipped with "Chi-ha", "Shin-hoto Chi-ha" and "Shi-ki" Medium Tanks and "Kyu-go" Light Tanks. The "Chi-ha" was a pre-war designed Type 97 medium 14-ton tank mounting a 57mm gun of low velocity, and two 7.7mm MG's, one in the bow, and the other in the turret facing to the rear. It had 10 to 25mm of armor, a four-man crew, and a top speed of 23 m.p.h. The "Shin-hoto Chi-ha" was an improved 1942 model of the Type 97 Medium Tank, mounting a 47mm high-velocity gun in a larger turret. It weighed 15 tons, had armor of 10 to 35mm thick, and a speed of 25 m.p.h.



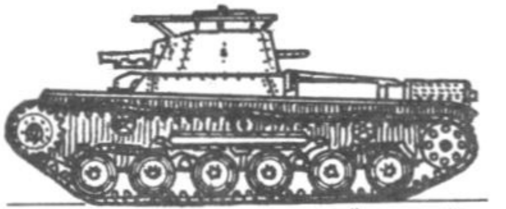
TYPE 97 MEDIUM SPECIAL TANK "SHIN-HOTO CHI-HA"

"Shi-ki" was a Command Tank variation of the "Chi-ha" and mounted a second 57mm gun in the hull in place of the bow machine gun.

"Kyu-go" was a Type 95 Light Tank of 9 tons, with a 37mm gun and two machine guns similarly mounted as on the Medium tanks. It had 6 to 12mm of armor, a three-man crew, and a top speed of 28 m.p.h. Compared to the Marine Sherman tanks, all of the Japanese tanks were inadequately armed and armored.

On the night of June 16th, the Japanese tank-infantry massed in the ruined city of Garapan. Riflemen and light machine gunners were sprawled on the tank engine compartments, or were hanging onto the radio antenna rails of the turrets. The rest of Colonel Ogawa's 136th Infantry Regiment assembled around the tanks. Colonel Goto opened his turret hatch on the Regiment's lead tank, stood erect, and then whirled his Samarai sword above his head. Turrets of other tanks opened and junior officers duplicated his signal. Col. Goto slapped the side of his turret with his sword. The other tank commanders spurred their steel mounts forward in the same manner. The mechanized cavalry charge moved down the road toward the positions of the 1st Battalion, 6th Marines, and the left flank of the 2nd Battalion, 2nd Marines.

The Marines were prepared for a night attack. Machine guns, bazookas, AT rifle grenades and 37mm AT guns bolstered their front-line positions. The Marines heard the squeaking and rattling of the Japanese tanks as they approached. All hands were alerted and naval gunfire illumination was requested. Mortars, Artillery and a Platoon of Sherman tanks were notified to stand-by. Four 75mm gun halftracks, parked near the Regimental CP, were soon dispatched towards the embattled front-lines.



TYPE 97 MEDIUM TANK "CHI-HA"

Star shells from a destroyer burst above the Japanese attackers and revealed them as night seemed to turn into day. Tanks in groups of four or five came-on in two waves. Crewmen led some of the tanks, and in others, tank commanders stood erect in unbuttoned turrets, waving their swords and shouting orders. Infantry clustered the tops of the tanks or trotted alongside their armor. The bulk of the supporting infantry followed behind the second wave of tanks. Prepared concentrations of Marine 81mm mortars, 75mm pack and 105mm howitzers were called down on them. The tanks drove into a pandemonium of flashing explosions. The front-line Marines opened fire and added the noise of their weapons to the carnage. The Japanese riding-on and surrounding the tanks were slaughtered Tanks that were hit and set afire illuminated others nearby, and many hesitated to advance. Col. Goto climbed out of his tank's turret. harrangued them from the tank's rear deck, and climbed back in again. A bugle sounded, the tanks came on again, and burst into the Marine positions Sharpshooting bazooka teams tore the attack apart. Marine PFC Herbert Hodges knocked out 7

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Aufklärungspanzer 38(t)

by Jim Steuard

Experiences gained by the German Wehrmacht in the Spring of 1942 and 1943 disclosed that conventional wheeled equipment suffered badly when forced to leave the few roads in Russia and operate cross-country. The Germans launched several programs to improve the mobility of their motorized equipment; the fully tracked Raupenschlepper 'Ost' and large-wheeled Radschlepper were but two evolved results of these programs.

In the field of armored reconnaissance, the 4-wheeled Armored Car designated as the Sd. Kfz. 222 was becoming more and more inadequate to perform its reconnaissance role in the Soviet mud. The Sd. Kfz. 222 had been partially replaced by a reconnaissance version of the one-ton light halftrack, the Sd. Kfz. 250/9, which mounted the turret and armament of the 4-wheeled armored car on the covered body of the halftrack. This vehicle, while not perfect, improved the cross-country mobility of reconnaissance units, however, the Germans decided that more improvement was possible and necessary.

The specification that resulted in the Aufklärungspanzer 38(t) appears to have been issued in October 1943, and a total of seventy (70) of these vehicles were produced in late 1943 and early 1944. These vehicles were constructed from available chassis of the Panzerkampfwagen 38(t), or Praga TNHP-S tank, as the Czechs designated the vehicle in the late 1930's. The Germans had continued the production of this tank, and then produced several antitank versions of the chassis when the tank armament proved inadequate in Russia. It appears that the Aufklärungspanzer 38(t) displaced the production of the 2cm armed Flakpanzer 38(t) at the factory during October 1943, as production of the Flakpanzer was being terminated. This is further indicated by the Sonder-Kraftfahrzeuge (or Special Purpose Vehicle) number: The Flakpanzer 38(t) carried Sd. Kfz. 140, and Aufklärungspanzer 38(t) carried Sd. Kfz. 140/1. This indicates the possibility that the factory used surplus chassis still available after the termination of the antiaircraft vehicle.

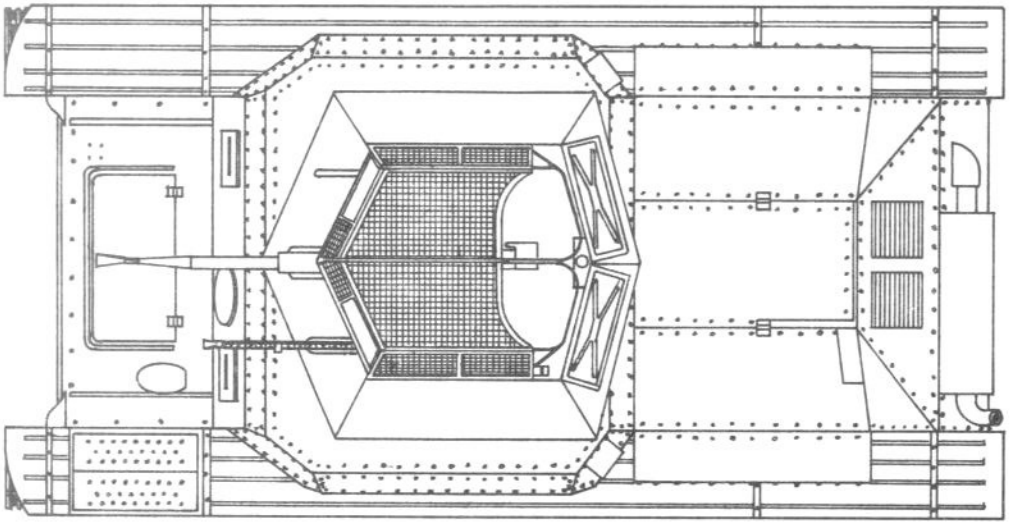
Various sources indicate that the Aufklärungspanzer 38(t) consisted of a normal Panzerkampfwagen 38(t) chassis, with the turret and armament replaced by the lightly armored turret from the 4-wheeled Sd. Kfz. 222 armored car, this turret being simply installed in the turret race of the tank.

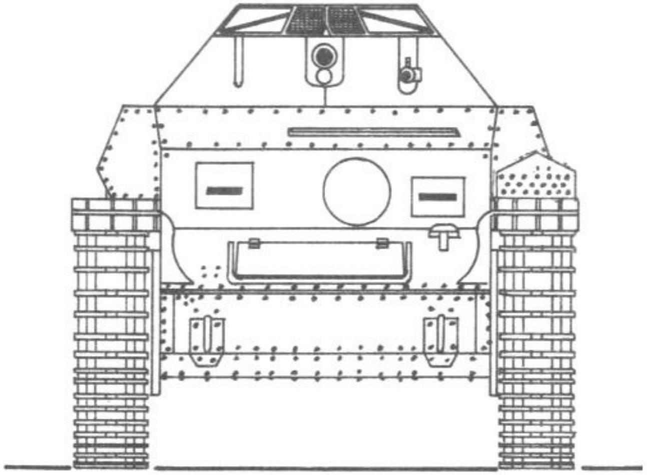
Close examination of available photographs reveal that this construction was not really the method used to produce this vehicle. The turret of the Sd. Kfz. 222 was not used; instead the similar turret of the Sd. Kfz. 234 eight-wheeled armored car was installed on a modified chassis of the tank. This turret of the eight wheeled armored car, while similar in armament, was constructed with an open rear, partially closed by two stowage boxes. It was larger than the four-wheeled version (perhaps to fit better in the larger turret race....?), and it was covered with screens hinging outward for partial overhead protection. This turret mounted a single 2cm KwK 30 or KwK 38 gun and a 7.92mm MG34 machine gun mounted coaxially. The gun mounting allowed for the engagement of low-flying aircraft, in addition to the customary ground targets.

The turret was installed on a widened and enlarged superstructure which was extended over the fenders on both sides of the tank hull, sloping inward on the lower surfaces. The normal hull-mounted machine gun was removed, and the machine gun aperture covered with a circular metal plate. The offset front plate of the hull on the early Pzkw. 38(t) tank was replaced with a straight hull front, with vision slits for both driver and radio operator. This revised front plate offered increased space for both crew members inside. The standard stowage fender boxes of the tank were retained, being moved forward because of the overhang of the modified superstructure.

The Sd. Kfz. 140/1 was constructed by the Böhmische-Mährisches Maschinenfabrik A.G. at Prage, Czechoslovakia. The total weight of the Aufklärungspanzer was 9700 kilograms (or 21,388 pounds), and it had a crew of four: the Commander, the Gunner, the Radio Operator and the Driver. The powerplant consisted of the standard 6-cylinder water-cooled in-line Praga EPA/AC/O which gave 150 horsepower at 2600 r.p.m. The engine size was 7,750ccm and it gave the vehicle a top speed of 42km/hr (or 23 m.p.h.).

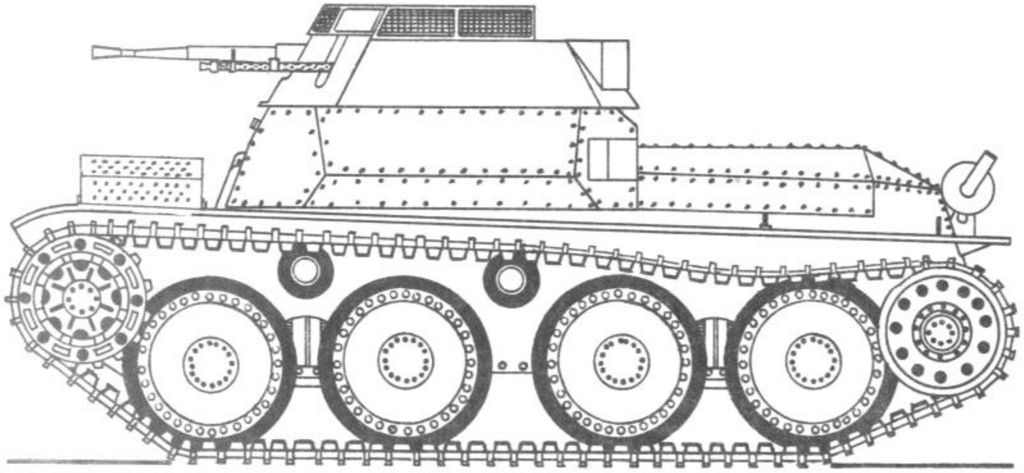
Since only seventy of these vehicles were produced, there are few photographs showing them in actual service. Little is known of which units that used them, and little is known of how well they performed in their assigned mission of combat reconnaissance. It appears that most of the examples of the Aufklärungspanzer 38(t) served on the Eastern front, probably in Panzerdivisions.

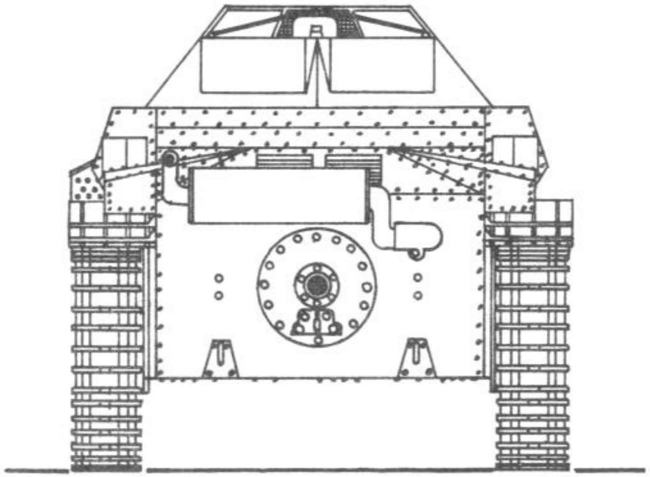




Aufklärungspanzer 38(t)
Sd. Kfz. 140/1

Drawn by: Steve Cobb
Scale: 1:32





Wargaming Review: The Complete Firing Table by Carl Weaver

This table, as shown in Figure #1, represents a basic revision of a table concieved by the author for a modern wargame (M-60 against T-54). The original table was drawn up, based on the following ideas:

1. Unless the gun misfires, or the gunner sneezes, it is almost impossible for a stationary M-60 to miss a stationary T-54 (or anything else) at ranges of 250 meters or less.

2. It is a bit harder to hit a moving or hull defilade target than a stationary one; and, 3. It is harder still for a moving tank to hit a stationary target, and neigh-on impossible for moving tanks to hit a moving target.

Another thing that occurs to anyone that has spent a few hours manhandling a tank track back onto its sprocket, is that any wargame should contain a random chance of thrown tracks, jammed guns, faulty automotive systems, etc., etc., etc., ad nasium. As a matter of fact, I recall one time in the old 5/32nd Armored when........but that's another story.

The table is made up in three parts: the Situation Table, the Kill Table, and the Damage/Failure Table. The first of these, the SITUATION TABLE, is used to determine the probability of hitting the target. This table takes the status (moving, stationary, or hull defilade) of the firing tank and its target, and the range between them, and determines which column of the KILL TABLE will apply. The numbers along the top of the table are the ranges in actual feet of the playing board and the player may substitute scale ranges for those numbers, or adapt them to present range sticks as they desire. On the left side of the table, the status of the firing vehicle and its target are listed. The vehicle that is shooting may be either stationary or moving. The best way to indicate the status of vehicles on the board is to place a small white card on moving vehicles at the end of their movement turn. As a penalty, only a vehicle marked as 'moving' on the last turn may move its full movement; a stationary vehicle receives a movement penalty (usually 50% of normal movement). Why? Because a stationary vehicle has a much better chance of hitting a target than a moving one. If you want to increase gun accuracy, you must pay the price in movement. The target vehicle must also be marked if it is moving, otherwise it is stationary or hull defilade.

For example: A Red tank moves across the board at top speed. A Blue tank, hidden in a hull defilade position, opens fire. The Red tank is marked with a white 'moving' card at the end of its turn, where the range between it and the Blue tank is three feet. Blue's tank is stationary (there is no advantage in gunnery in being hull defilade) and its target is moving, so we use the "stationary to moving" line on the table, and go out to the "3" column. This gives us a "D" column to enter on the KILL TABLE.

The KILL TABLE is a simple progression - as you move from left to right across the columns, the chance of a hit decreases; from 29 out of 36 permutations in "A", to 24, then 20, 16, 6, 3, and 2 possibilities with a roll of two dice. The number of the dice roll is found along the left side of the table, and this line is followed across to the column headed by the letter from the SITUATION TABLE, in the example, column "D", when a letter appears in the box, the firing tank has scored a hit. A "K" means that the target is killed, a "D" that is has been damaged. When a vehicle is damaged, the dice are rolled again and the DAMAGE TABLE is consulted. This table lists the possible catastrophes that may result from a hit. "Automotive" damage means that the vehicle cannot move on its own power for the specified number of turns; "Armament" damage means that the vehicle cannot fire; "Crew" or "Maint." refers to the extent of repair needed. "Crew" damage would indicate a malfunction that the vehicle's crew may repair in the field; however, it should be noted that if the crew are making repairs, they cannot fire the gun or drive the vehicle. "Maint." refers to damage which requires the company or battalion maintenance personnel to repair. This is provided in the form of a number of vehicles designated as maintenance vehicles before the game starts. Naturally, the number of turns needed to complete repairs cannot start until the maintenance vehicle arrives.

The Mechanical Failure Table is similar to the Damage Table. If a firing tank rolls a "2", then the dice are rolled again and the mechanical failure table is consulted; this time the disaster happens to the firing tank, and the target remains unscathed. Likewise, when an unfortunate tank commander rolls a "12", his crew abandons the tank and heads for the hills. Whoever is still around, friend or enemy, may then capture the vehicle by moving within 2 inches of it; and then immediately use it, either against the enemy or possibly against its former owners. A not too unrealistic situation as many WWII. photographs atest. The type of damage or failure should be in-

- Continued on Page 23 -

FIRING TABLE

	A	B	C	D	E	F	G	RL	MG	Mines
2	Mechanical Failure									D
3						K	K		K	
4	D	D								
5	K	K	D	D				D		D
6	K	K	K	K	D			K	K	D
7	K	K	K	K	K	D		K	K	K
8	K	K	K	K	D			D	K	D
9	K	K	K	D						
10	K	D	D				D			
11	D					K	D			
12	Abandon Tank									D

		1	2	3	4	5	6
Stationary	Stationary	A	B	C	D	E	F
Stationary	Moving	B	C	D	E	F	G
Moving	Stationary	C	D	E	F	G	G
Moving	Moving	E	F	G	G	G	G
Stationary	Hull Defilade	C	D	E	F	G	G
Moving	Hull Defilade	E	F	G	G	G	G

	Mechanical Failure	Damage	Mine Damage
2	KILL	Automotive OUT	Automotive OUT
3	Armament "E" Table	Abandon Vehicle	Abandon Vehicle
4	Automotive Maint.	Armament "E" Table	Automotive Maint.
5	Automotive Maint.	Automotive Maint.	Automotive Maint.
6	Auto. Crew 2TURNS	Auto. Crew 1 TURN	Auto. Crew 1 TURN
7	Automotive OUT	Automotive OUT	Automotive OUT
8	Armament OUT	Armament OUT	Auto. Crew 3 TURNS
9	Arm. Crew 3 TURNS	Abandon Vehicle	Abandon Vehicle
10	Armament Maint.	Armament "E" Table	Auto. Crew 2 TURNS
11	Armament "E" Table	Abandon Vehicle	Abandon Vehicle
12	KILL	Armament Maint.	Auto. Crew 3 TURNS

beg'70

Color 'n Camouflage

by Norb Meyer & Jim Steuard

The U.S. Army M-8 Armored Car in Italy

With the exception of a few "reverse lend-lease" vehicles, the M-8 and its kissing cousin, the M-20 Armored Utility Vehicle, were the only Armored Cars used by the U.S. Army in World War II. Both of these vehicles were robust and entirely adequate six-wheeled cars that continued to see service long after the close of World War II. For the modeler, an excellent 1:35 scale kit of the M-8 is manufactured by the Tamiya Model company, and our coverage for this month will illustrate typical markings for these vehicles.

Our set of markings for this article covers a vehicle used by Troop A of the 91st Cavalry Reconnaissance Squadron, which was probably the senior Army-level reconnaissance unit in the Mediterranean theater of combat. The 91st Cavalry Reconnaissance Squadron saw combat in Tunisia, and in Sicily, before landing in Italy (at Salerno). The battalion saw combat in and near the Casino sector, and it was extremely active in the link-up between the Allied forces from Salerno and Anzio, being the first unit of the Salerno force to actually meet British troops of the force that had landed at Anzio-Nettuno. The markings on our particular vehicle are based on a photograph taken during the rapid advance and link-up between these two forces on May 25th, 1944. After the close of the Casino fighting, the 91st Cavalry, under command of Lt. Col. Charles A. Ellis, led the advance towards Anzio along Highway 7, acting as an advance guard and screening force for the 88th Infantry Division which was following. The 91st Cavalry saw combat during this time against elements of the 'crack' German 29. Panzer-Grenadier-Division, which was stubbornly defending the Pontine Marshes. After forcing the Germans to evacuate Teracina, the 91st made contact with British troops of the Anzio force in the marshes.

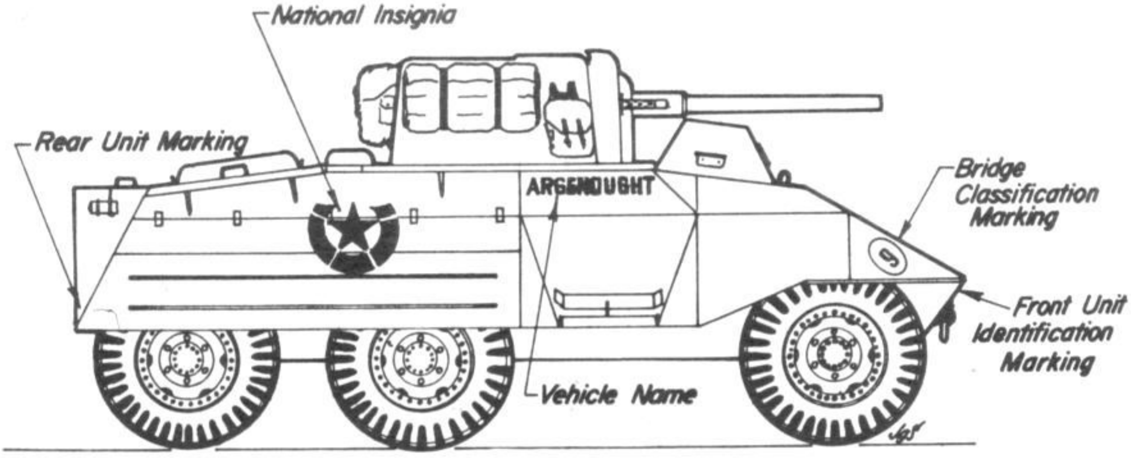
WEATHERED OLIVE
15 pts Floquil M39 Olive Drab
6 pts Floquil RR63 Mud

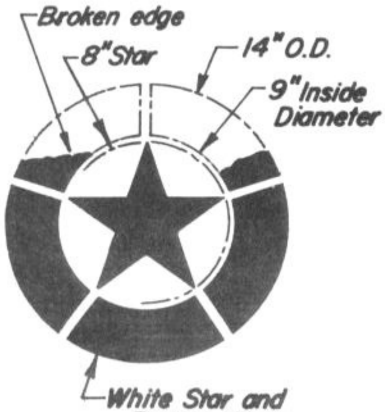
🟩

Almost all vehicles of the U.S. Fifth Army in Italy were painted in the standard overall Olive Drab finish that was typical to American vehicles during World War II. Our M-8 was no exception, and our paint chip for this article illustrates the correct Olive Drab that has been well-weathered by sun, rain and exposure to dust and dirt. At the time that our photo was taken, the M-8's of the 91st Cavalry had little time for cleaning and the niceties, and vehicles were well covered with dirt and grime as well as the numerous pieces of baggage accumulated by a unit in combat.

Most U.S. Army vehicles were identified by registration numbers, generally painted in black or white on vehicle sides. Our particular M-8, however, had no visible registration numbers. An assumption can be made these numbers were painted over at some earlier re-painting, or that they were deleted for security reasons.

There were a number of markings on our particular vehicle that seems to have been peculiar to vehicles in Italy, or to the 91st Cavalry Reconnaissance Squadron. These markings are shown


National Insignia
Rear Unit Marking
ARGENOUGHT
Bridge Classification Marking
9
Front Unit Identification Marking
Vehicle Name

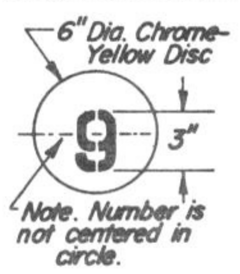


National Insignia and Allied Identity Marking

in the sketch on page 12. The first of these markings is the National Insignia which was modified to serve as an Allied Identity Marking. This marking consisted of a white star of approximate 8 inch size, inside of a thick stenciled white ring. This ring had an approximate 14 inch outside diameter, and a 9 inch inside diameter, and it was broken in five places opposite the points of the star, as shown at the left. This insignia was painted on the sides of our M-8, on the rear fender skirting. The top portion of the stenciled ring was missing on our M-8, evidently due to the wear of feet or baggage against it. This marking, incidently, was standard to all British and American combat vehicles after 1943.

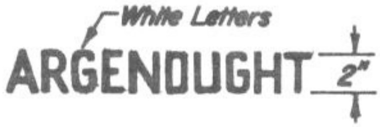
Another marking that was shared by both the British and American forces was the Bridge Classification Marking, which indicated the total weight of a vehicle combat loaded. This marking was used as a limit for bridge crossings, and most bridges in the combat zone were marked as to the maximum weight allowable. The Bridge Classification Marking was painted on the front of the M-8 on the small triangular shaped piece of armor plate that angled back from the front plates of the vehicle. The marking consisted of a 6 inch diameter chrome yellow painted disc, with a 3 inch stenciled number "9" that appeared offset to the lower portion of the disc. The number nine was painted so that it was horizonal to the ground, and it appeared only on the left front corner of the M-8.

Bridge Classification


6" Dia. Chrome-Yellow Disc
9
3"
Note. Number is not centered in circle.

The vehicles of the 91st Cavalry Reconnaissance Squadron were evidently named, in a manner that suggest a parody or a similarity to the British typical system, where all vehicles in "A" Troop carried names starting with A, all vehicles in "B: Troop with the letter B, and so on. Our particluar M-8 was named "Argenought", an obviously misspelled play on words? At any rate, the name was painted in 2 inch high block letters, in white paint, on both sides of the M-8 immediately above the cut-out behind the front wheels. Refer to the sketch on the preceding page for exact location.

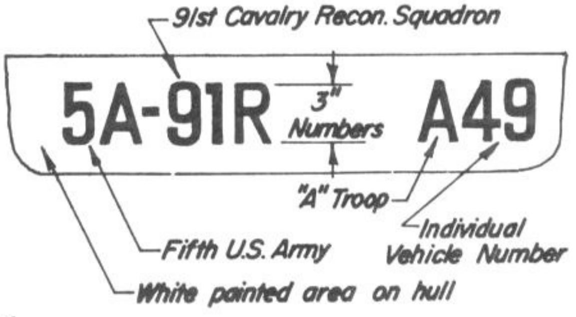
In a practice that was typical to the U.S. Army, all vehicles were identified by a form of unit identification painted on the front and rear, usually on the bumpers of wheeled vehicles, and on the armor plate of tanks and other armored vehicles. This unit identification was in a form of code and it indicated not only the unit that the vehicle was assigned to, but also the higher headquarters that the unit was assigned to. This complete system will be covered in a later article in the AFV-G2. On our particular M-8 armored car, the front markings were painted in 3 inch high black numbers and letters on a crudely paint patch of white paint, that appeared between the towing rings on the lower front of the hull. The complete identification code was divided into two different parts, the section on the left which indicated the higher headquarters and the actual unit, and the part on the right which identified the 'company' and the actual vehicle number. On our vehicle, the letters "5A", which identified the Fifth US Army, indicated that the 91st Cavalry Squadron was an Army or Corps- level Reconnaissance unit. The numbers "91R" gave the actual unit that the vehicle belonged to; in this case the letter "R" meant "Reconnaissance", to indicate the type of unit and mission of the unit. The right grouping of letters and numbers: "A49" indicated that the vehicle belonged to Troop A within the Squadron, and that the individual vehicle number was 49. Incidently, all Cavalry units were designated 'Troop' instead of Company, and 'Squadron' instead of Battalion.



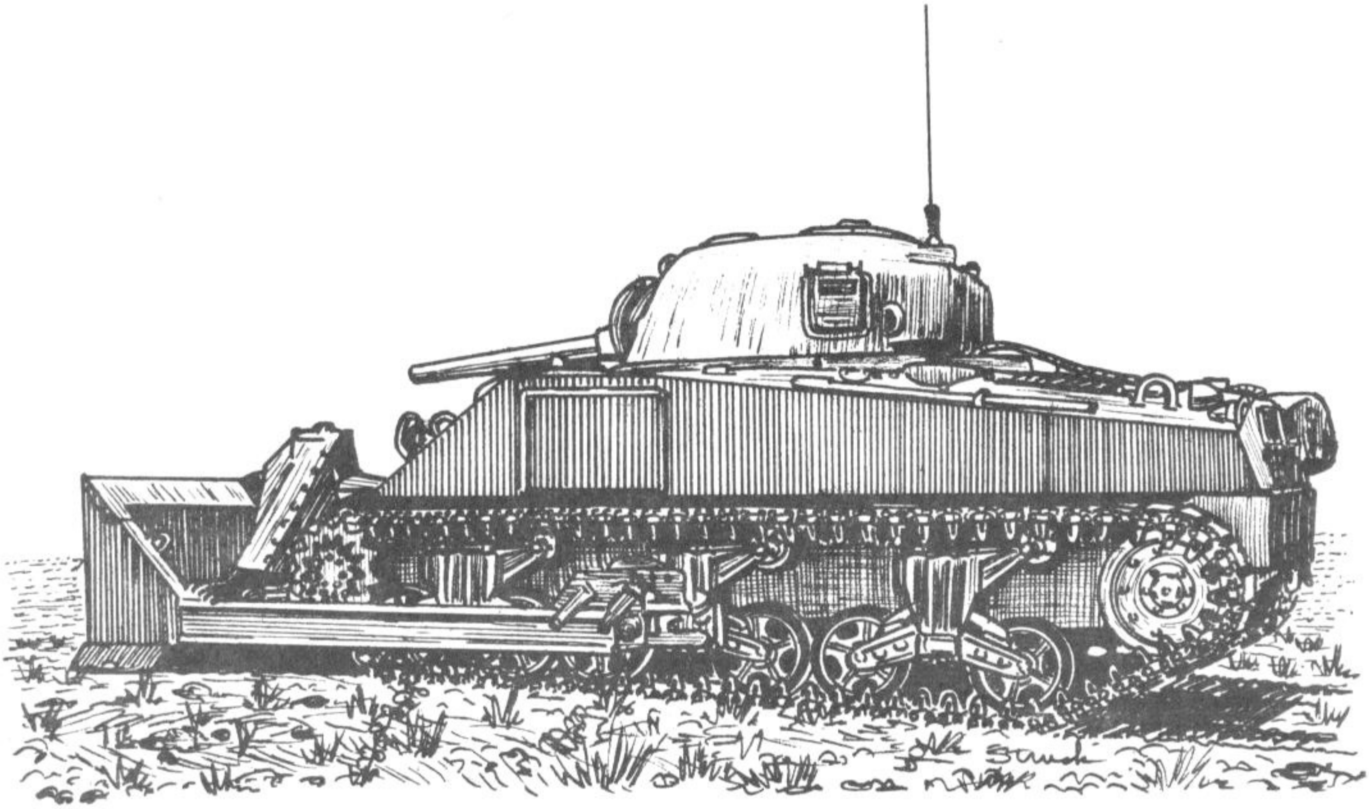
Vehicle Name

An identical code appeared on the rear fenders of our M-8, to identify the vehicle when viewed from the rear. The "5A-91R" (or left section of the code) was painted on the left fender (when facing forward) in 2 inch high black letters and numbers, again on a white patch. The "A49" (or right section of the code) was on

Unit Identification Markings (Front)


91st Cavalry Recon. Squadron
5A-91R
3" Numbers
A49
"A" Troop
Individual Vehicle Number
Fifth U.S. Army
White painted area on hull

- Continued on Page 26 -



Marine Tanks in the Pacific - Part VIII.

by Joe Struck

On July 21st, 1944, the Third Marine Division and the First Provisional Marine Brigade assaulted the island of Guam. The Third Division hit the beaches with three regiments abreast, and the divisional 3rd Tank Battalion followed the assault waves: Company A on the right flank with the 9th Marines, most of Company B in the center with the 21st Marines, and Company C on the left flank with the 3rd Marines. The Marine tanks debarked from LCM's at the edge of the reef and waded-in to the beaches.

Japanese guns in caves poured heavy fire down on the 3rd Marine Regiment. The tanks of Company C took up positions below and fired directly up into the caves, silencing them while Marines assaulted the position. By noon, the cliffs had been cleared of opposition.

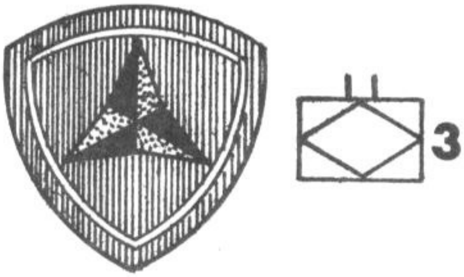
On the right, the firepower of Company A tanks allowed pinned-down 9th Marines to move forward again. Company B's tanks supported 21st Marines, who captured the highground which overlooked the beach. The different Marine units tied-in and prepared for the night.

Six miles to the south, beyond Apra Harbor and Orote Peninsula, the First Marine Brigade landed with the 4th Marines on the right and the 22nd Marines on the left. Soon after the assault waves of the 22nd Marines landed, a few Shermans of the regimental tank company were sent to eliminate enemy 75mm and 37mm guns of Gaan Point that were enfilading the beach. The tanks moved around to the rear of the position and blasted the surprised Japanese gunners before they could retaliate. The rest of the tanks had trouble getting ashore; it took more than an hour for them to wade-in from the edge of the reef. Shell holes, mines, mortar fire and poor directions had delayed them.

On the right, the 4th Marines' organic tank company supported their rapid advance inland. When dusk came, the Marines dug-in and awaited the usual Japanese night attack. A tank platoon led by Lt. James Williams was positioned to block the approach route for armor, toward the center of the perimeter. Two attacks were beaten off, and then the third hit the center, supported by four light tanks and a number of truck-mounted self-propelled guns. A Marine with a bazooka knocked-out two of the tanks before he was killed. The Shermans went into action and quickly destroyed all of the rest of the enemy vehicles, and chased the Japanese infantry back. Japanese counterattacks were repelled around both Marine perimeters all night long.

On the second day, the 22nd Marines of the First Brigade pushed steadily ahead behind their tank company, until the advance reached the Ayuja River. The tanks were unable to cross, and LVT(A)'s had to take over the support of the advance. Engineer support was requested to help the stopped tanks to get across the river, but none was available. Tankers began filling in a fording causeway across the forty-foot river bed under enemy fire. Assisted by the company's tank bulldozer, it took the tankers one day to do the job themselves.

The 4th Marines and their tanks drove through mud paddies, and up into the foothills toward Mount Alifan. In the first three days of the advance, the Brigade's Marines and tankers captured the mountain, took Agat village and greatly enlarged the southern beachhead.

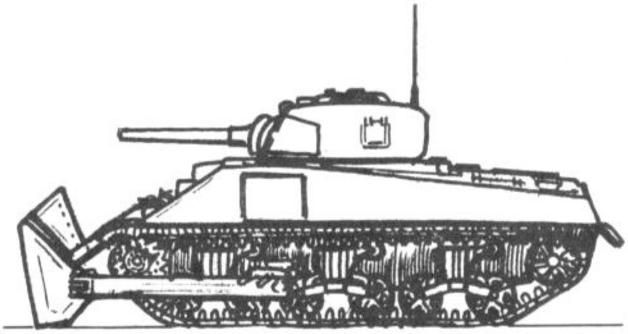


Insignia of 3rd Tank Battalion,
THIRD MARINE DIVISION

Up north, the Third Division was fighting hard to extend their beachhead. It took four days of hard bloody fighting to advance, mop-up their sector, and link-up.

The Marine Brigade turned over most of the southern perimeter to the Army's 77th Division, and then drove north toward Orote Peninsula. The tanks supported the advance, but muddy rice fields forced them to use roads that were heavily mined and covered by numerous antitank guns in strongpoints along the road. Tanks blasted pillboxes and log barricades and inched ahead. Five enemy tanks challenged them, but Shermans made short work of the Japanese armor, and left them gutted and burning along the road. The Japanese were driven back and sealed off on the Orote Peninsula, with Marines dug-in across the narrow neck. The assault on the Orote started on July 25th. 22nd Marines had to advance through the fire of numerous camouflaged machine gun nests. Little cover was available except behind the few tanks. Very soon, the 22nd Marines were hit by an enemy tank-led counterattack. In the tank battle that followed, eight Japanese tanks were destroyed and four more set on fire. None of the Shermans were seriously damaged. On the left flank, the 4th Marines slugged their way forward and linked-up for the night.

On the night of July 25th, the Japanese made a drunken all-out attempt to win the losing battle for Guam. There was plenty of whisky, sake and beer to get the troops roaring drunk; since most of Japan's liquor was produced on Guam. Front line Marines could hear screaming, yelling, laughing and the breaking of bottles. Then came waves of staggering crazed Japanese, to be mowed down and piled-up in front of Marine positions. The Brigade's lines held, and daylight revealed hundreds of dead Japanese that had been killed right up into foxholes containing Marines that were still locked in death struggles with their dead opponents.



Tank 'Dozer—a Sherman with M-1 Bulldozer Blade, used on Guam.

While the Brigade was involved in repelling the frenzied Banzai charges, the Third Division became involved in fighting off a massive well-organized counterattack by 5000 enemy troops, supported by artillery. The first attack burst against the 21st Marines. Shermans behind the front lines took a great toll of attackers, and drove the survivors back. A wide gap, however, was forced in a thinly held draw between the 21st and 9th Marines. A mass attack poured through and swept towards the beach. Some of the attackers were special suicide squads carrying land mines and packs of explosives. The Marines firing from the bent-back flanks caused many of these human bombs to explode. Tanks parked in front of the path of the breakthrough fired their machine guns in vain trying to stop the irrestible surge. The Japanese horde swept down upon the tanks, attacking them with bare hands. They fired rifles, kicked and pounded with their fists to get at the crews within the buttoned-up tanks. They were oblivious to machine-gun fire as tankers shot them off of each others tanks. Fortunately, the mines and explosives were not used on the tanks, but were probably intended for the Marine artillery. The Japanese wiped out two mortar platoons at the base of the cliff, and attacked a Battalion CP, which was hastily defended by cooks, clerks and staff officers. Artillerymen defended their guns and fought suiciders. Doctors

- Continued on Page 27 -

The German Assault Gun Battery - Type 1943

by Jim Steuard

German Assault Gun units were first formed in 1937, equipped with the first prototypes of the Sturmgeschütz III. assault gun, mounting the short 7.5cm L/24 gun. The first four batteries of these weapons saw combat in the French campaign, and the development and utilization of these weapons was rapid from that date. By late 1942, the short L/24 gun had been judged inefficient, and they were being replaced by the longer and more effective 7.5cm StuK 40 L/48. Tactics and organization had also undergone several revisions, evolving into the 1943 type organization.

The Assault Gun Battery was a component of the Heeres-Sturmgeschütz-Brigade (or Army Assault Gun Brigade). This brigade was a separate unit capable of independent operations; it was usually assigned to an Army or Corps, and then attached to a Division for support of its troops. It should be mentioned that Assault Guns were not a part of the Panzer (or Armored) Branch;they were organic to the German Artillery branch, even though the guns were mounted in armored vehicles. Their prime assignment in combat was to offer fire support and antitank defense to the German Infanterie-Division to which it was attached. In the attack, assault guns were to lead the spearhead of the attack,firing at targets which would hinder the infantry troops, such as bunkers and machine-gun posts. In the defense, assault guns were to fire support missions against the attacking enemy, and also to be the major form of antitank defense against enemy armor. In most cases where support was with Infanterie-Divisionen, the assault guns were the only available armor to counter the enemy.

The Heeres-Sturmgeschütz-Brigade was formed with the following units:

Stab und Stabsbatterie, StuG. Brig.	Headquarters & Headquarters Battery
1. Sturmgeschütz-Batterie	1st Assault Gun Battery
2. Sturmgeschütz-Batterie	2nd Assault Gun Battery
3. Sturmgeschütz-Batterie	3rd Assault Gun Battery

In combat, the Headquarters and Headquarters Battery was the unit which offered most combat support to the firing or battle batteries of the Brigade. If medical, supply, replacement parts, replacement personnel, or recovery support was needed that was beyond the capability of the individual batteries, it was furnished by the Brigade Headquarters Battery. The numbered firing batteries of the Brigade generally operated under the direct control of the Brigade Headquarters, although, on several occassions, individual Sturmgeschütz Batteries were separated from the parent Brigade, when urgently required by the tactical situation. Whenever possible, however, the batteries fought as a part of their Brigade, under Brigade control. It is important to realize that the German infantry commander who was being supported, did not control any of the assault guns;they were independent units, to support his activities when called-on.

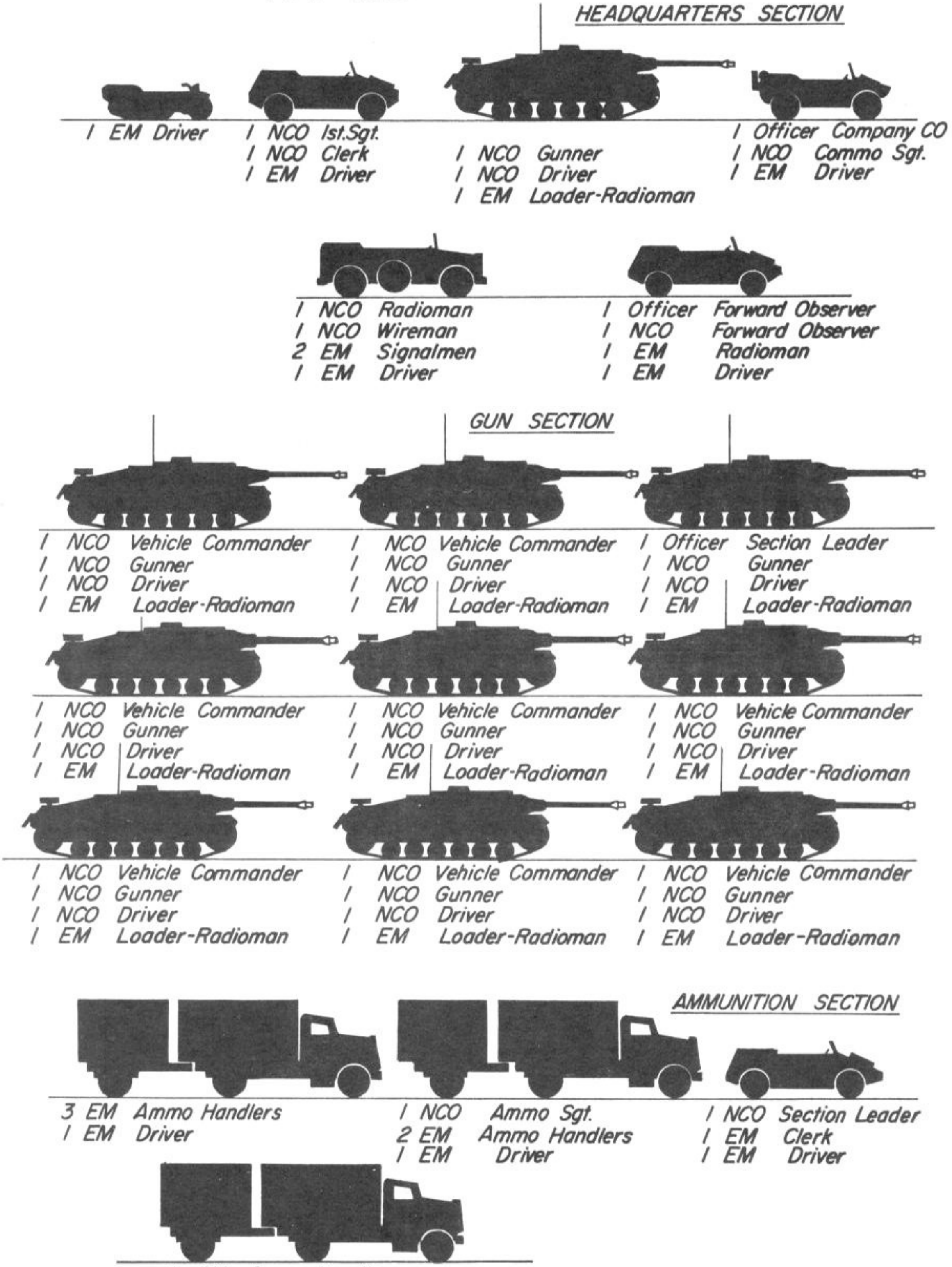
The Sturmgeschütz-Batterie was organized into five sections, or groups, as follows:

Batterie-Trupp	Command Group
Kampfstaffel	Combat Section
Munitionsstaffel	Ammunition Section
Kfz. Instandsetzungsgruppe	Maintenance Section
Batterietross	Supply and Trains Section

The Headquarters Group consisted of one Assault Gun for the Commander's use in leading the Battery, three small light cars (such as the Volkswagen Type 82) for the use of the Battery 1st Sergeant and the Forward Observation Section, and also one for the Battery Commander (usually a Schwimmwagen) when he was not in his assault gun. There was also a Kfz. 15 "Einheits" vehicle for the signal personnel, both radio and wire. The Battery was commanded by either an Oberleutnant (1st Lieutenant) or a Hauptmann (Captain).

The Combat Section consisted of nine Sturmgeschütz III. assault guns, led by an officer,usually a Leutnant (or 2nd Lieutenant), who functioned as a Section Leader. Generally, the Combat Section was broken up into three Platoons of three vehicles each. This sub-division into three Platoons was not official, but it solved the problem of how best to control nine vehicles. The Leutnant led the first of these platoons, and the other two were commanded by the two most senior non-commissioned officers in the section. When the Batterie was partially equipped with the 10.5cm Sturmhaubitze (or Sturmgeschütz III. mounting a 105mm howitzer), these vehicles were normally placed in the "third" platoon. In some cases, however, the Sturmhaubitzen were used as one in each platoon. This "platoon" organization was worked up as experience provided examples of

STURMGESCHÜTZ - BATTERIE
TYPE 1943



HEADQUARTERS SECTION

1 EM Driver

1 NCO Ist.Sgt.
1 NCO Clerk
1 EM Driver

1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 Officer Company CO
1 NCO Commo Sgt.
1 EM Driver

1 NCO Radioman
1 NCO Wireman
2 EM Signalmen
1 EM Driver

1 Officer Forward Observer
1 NCO Forward Observer
1 EM Radioman
1 EM Driver

GUN SECTION

1 NCO Vehicle Commander
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 NCO Vehicle Commander
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 Officer Section Leader
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 NCO Vehicle Commander
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 NCO Vehicle Commander
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 NCO Vehicle Commander
1 NCO Gunner
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1 EM Loader-Radioman

1 NCO Vehicle Commander
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 NCO Vehicle Commander
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

1 NCO Vehicle Commander
1 NCO Gunner
1 NCO Driver
1 EM Loader-Radioman

AMMUNITION SECTION

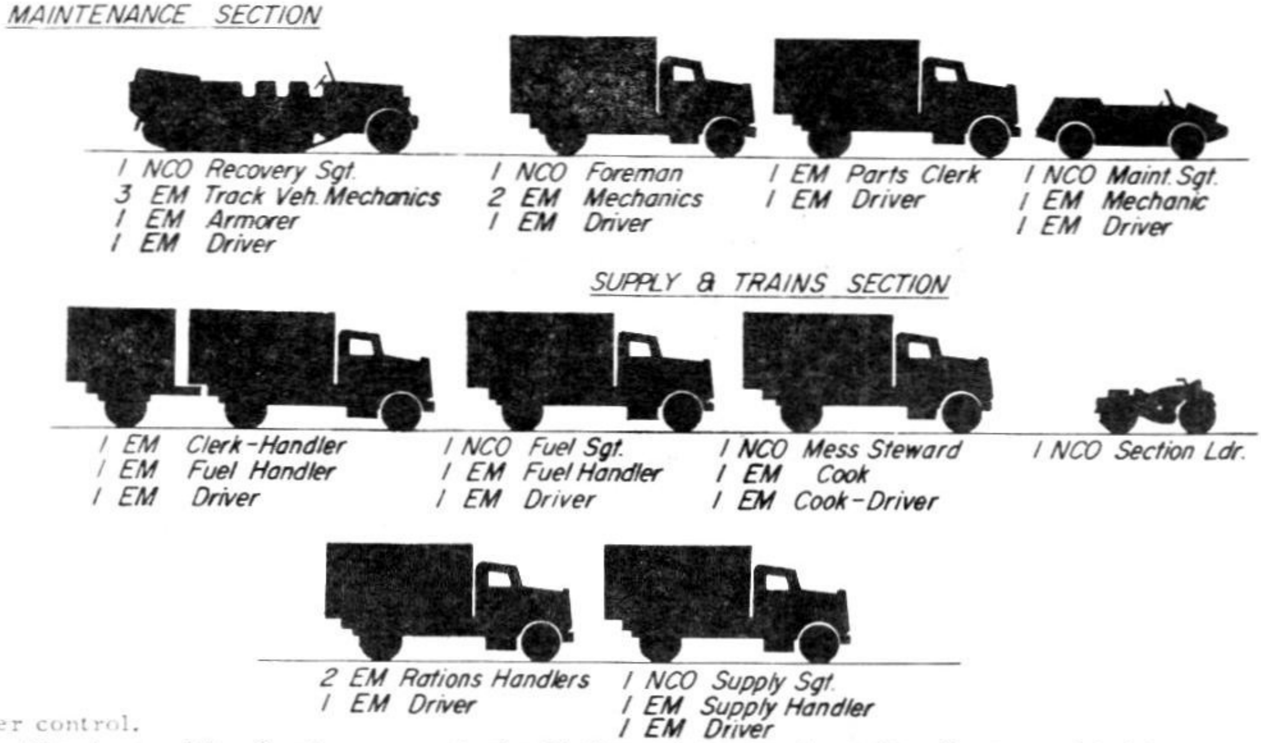
3 EM Ammo Handlers
1 EM Driver

1 NCO Ammo Sgt.
2 EM Ammo Handlers
1 EM Driver

1 NCO Section Leader
1 EM Clerk
1 EM Driver

3 EM Ammo Handlers
1 EM Driver

better control.



The Ammunition Section, organized with three 3-ton trucks and trailers, and led by a non-commissioned officer, was charged with ammunition resupply. Each assault gun was equipped to store 42 rounds of ammunition for the 7.5cm gun; generally the crew managed to find extra storage space for as much as 100 rounds total, since the mud of Russia prevented rapid or efficient resupply. The three trucks and trailers were barely adequate for resupply, when frequent mechanical breakdowns were considered, and ammunition supply was one of the most critical areas of battery operation.

The Maintenance Section consisted of personnel and equipment designed for recovery and small repair of breakdowns, of both armored and non-armored vehicles. There was a halftrack prime-mover, crewed by track vehicle specialists, available for recovery of broken-down or combat damaged assault guns. One of the section's 3-ton trucks was equipped with a small workshop; it was crewed by mechanics for wheeled vehicle repair. The other 3-ton truck carried enough repair parts to keep most emergencies or repairs under control. With operations in Russia, the Section was one of the "headache" areas of the battery, where effective work contributed to success in battle. With top quality mechanics and recovery men, the assault guns were kept running and in action. Often, the repairs made in the dark of the night, with battle lanterns, made the difference in the next day's defense against the Soviet T-34 tanks.

The Supply and Trains Section was equally important to battery morale and operations, for it included the means by which the personnel of the battery were fed, and by which the battery's vehicles were kept supplied (hopefully) with fuel. The five trucks and one trailer were divided into the one vehicle (3-ton) Mess Section, the two vehicle Fuel Section, and the two vehicle Ration and Supply Section. The Batterietross was led by a senior non-commissioned officer who utilized a motorcycle to furnish communications between the elements of his widespread "empire", which stretched from the battery's forward areas (with fuel supply) to the Infanterie-Division rear area (where food was obtained). This Sergeant had a large responsibility to keep the battery moving and well-fed.

The 1943 organization of the Sturmgeschütz-Batterie was not the final solution, as problems became more evident in 1944 and 1945. Quite often, the infantry troops that were being supported did not have sufficient knowledge of armored vehicles to offer close support against Russian anti-tank close combat teams. Other problems with resupply and maintenance prevented the batteries from their mission of knocking out enemy tanks. In 1944, the Heeres-Sturmgeschütz-Brigade was redesigned into the Heeres-Sturmartillerie-Brigade of 45 guns, with better control, resupply, and its own organic infantry support. More on this organization in a future issue.

The Baron's Corner

Modeling Hints by Norb Meyer
Submit your modeling problems in writing
to the Editor.

Question: I've seen some beautiful 'scratch-built' models. The lines on the edges of the sheet plastic are so straight! How can you cut sheet styrene so straight?

Answer: This is the very same problem that I had when I first started 'scratch-building', and it took me two years to discover the secret. When all you've got to cut sheet styrene with is an Xacto knife and a ruler, one cannot expect perfection.

The first thing that I would like to explain is why you cannot get a really true straight cut, using just an Xacto knife. The blade, even if it is very sharp, acts like a rudder on a boat. If you angle the blade just a little amount away from the ruler, and it will take-off in some unplanned direction. When this happens, of course, you will never get the edge straight, for you will never quite get back on the 'true' course.

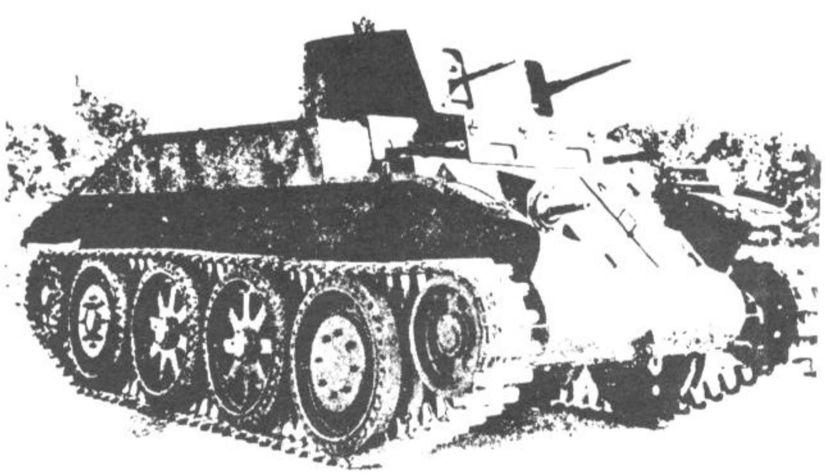
The best, and for me the most successful, method has been to whip-out my trusty metal ruler or straight-edge, and my scriber. First, map out the part that you want to cut-out on a piece of tracing paper to the exact dimensions required. Then, at each place that you have a corner, make small dents through the paper onto the sheet styrene. Lift off the paper, and connect the dots (or dents), using the straight edge and scriber to groove the plastic. What you are doing is to scribe (or pre-dent) a line for your Xacto knife to follow. Make your first scribed lines over the plastic lightly, then make a second pass a bit more heavier, and make a third pass over the plastic if you are cutting thick styrene. After scribing, make a light cut with your Xacto knife, using the straight edge to steady your knife blade. Make a second cut that is a bit more heavy; then snap the pieces apart and you have a true straight line in sheet plastic. Of course, this method also works if you have a circular cut or round piece to cut out. You will just have to take a little more care to make your scribed lines accurate. If you use a compass to draw the circles first, substitute a needle or compass point for the lead, and then use your compass as a scriber.

Well, there you have it. The more you practice with this method, the better your results will be. Good luck.........

The AFV ? ID QUIZ

What is it? If you think you can correctly identify the photo that appears in this month's AFV-ID Quiz, why not mail your answer to the Editor; Attn:AFV-ID. The first 5 correct answers receive prizes of Airfix armor models. Note: All answers to be eligible, must be postmarked prior to the next issue's release date.

There's no tip this month....



Wargame Conversions:

Brummbär

by Jim Garrison

The need for a heavily armored assault howitzer became apparent to the Germans during the fighting in Stalingrad. By personal order of Hitler, 155mm sIG 33 guns were mounted on the chassis of the Panzerkampfwagen IV. The resulting AFV became known as "Brummbär", or as Sturmpanzer IV. "Brummbär" (Sd. Kfz. 166), the official designation. Only 40 to 60 "Brummbärs" were built, but even with the small production run, there were differences between individual vehicles, mainly in the area of the driver's visor.

Obtain one ROCO Panzer IV. chassis (Z-106 to Z-110) for each "Brummbär" that you wish to build. The 1:32 scale drawings of this vehicle that appeared in the May 1970 issue of AFV-G2 (Volume 2 No. 2) will be of great help in detailing your "Brummbär". Disassemble the Panzer IV. and put the turret in your scrap box for future use.

To start construction, cut a piece of .020 sheet styrene in the shape of the template, shown full size as Figure 1. below, and score along the dotted lines. Then bend on these dotted lines to make the superstructure. Fit the "rear edge" of this superstructure to the line on the Panzer IV. upper hull that divides the fighting compartment from the engine compartment, and glue in place. Next, the side plates are fitted and glued to the outer edges of the fenders. Finally, the angled plates and front plates are positioned and cemented. Be patient and take your time, as each of the numerous surfaces should be glued separately, working from the bottom of the Panzer IV. upper hull.

I used the end of a piece of rounded sprue of large diameter to make the ball mounting for the howitzer. After shaping, this piece was glued in place. For the barrel and sleeve, a piece was cut from the barrel of the "Hunting Tiger". The end of the barrel was tapered with fine sand paper, and the barrel and sleeve was glued in place at the desired angle.

If the driver's compartment is built-up, following the drawings in the May issue of AFV-G2, you have a later version of "Brummbär". This later version may additionally have a ball mounted light machine gun, mounted above the drivers compartment, as the last versions of "Brummbär" were so equipped.

For the early version of "Brummbär", the driver's compartment may be modeled from the ROCO Tiger I. To finish your model, add the various hatches to the top of the superstructure as indicated in Figure 2. below, and in the 1:32 scale drawings. Storage boxes and ventilators may also be added, using the drawings. The side plates (supplemental armor....Ed.) from the Panzer IV. (Z-108) may be added, but these are optional.

Your model is now ready for paint.....Use the "sand-tan" as a primer, and either spray or daub reds and greens to produce a mottled effect. A small one or two digit number may be added to the superstructure; the "Altmark" decals work excellently for these numbers, as well as the usual German crosses to be applied to both sides of the upper superstructure.

Your "Brummbär" will be as effective in miniature street fighting against heavily entrenched or fortified positions as was the full scale "Brummbär".

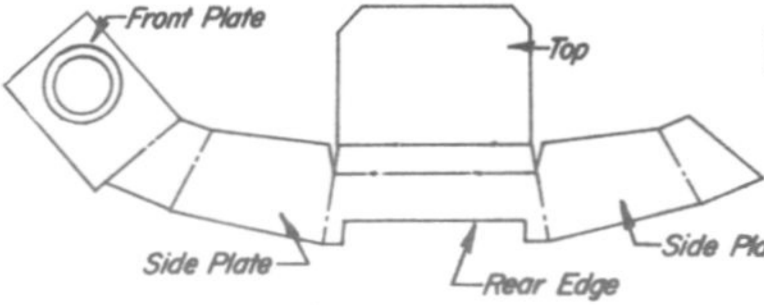


FIGURE I. TEMPLATE

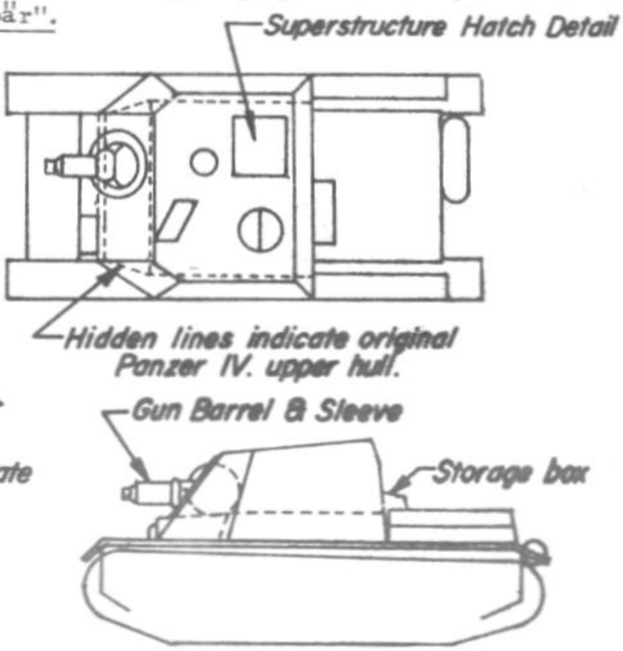
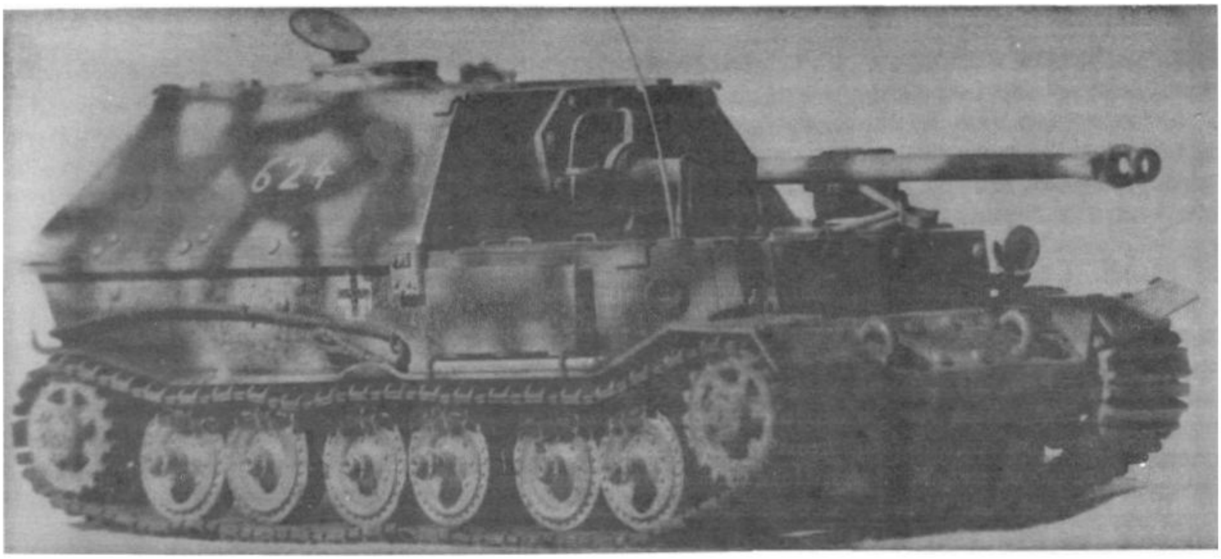

Superstructure Hatch Detail
Hidden lines indicate original Panzer IV. upper hull.
Gun Barrel & Sleeve
Storage box

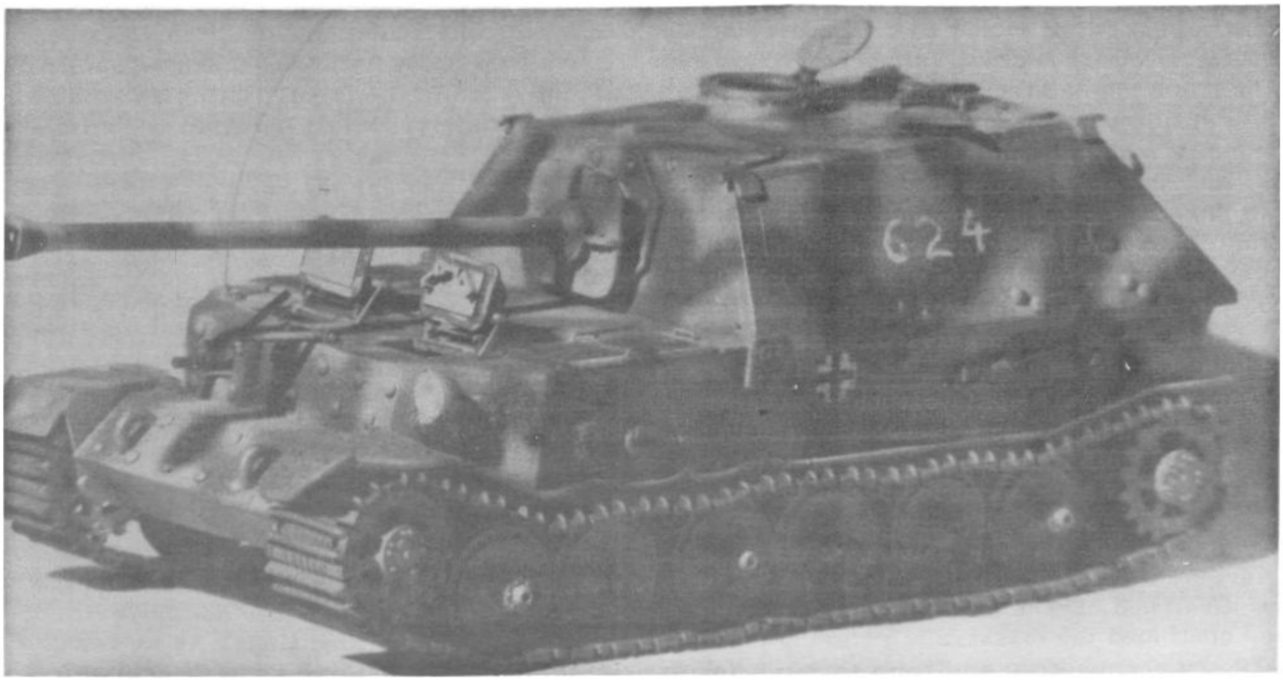
FIGURE 2. TOP & SIDE VIEWS

The Modeler's Page

Devoted to the examination by photograph of some of the best examples of Armor Models, from Super-detailed Kit models, to unusual and unique Conversions, and finally, to the complete Scratch-Build armor model, the highest form of the modeler's art..........................



This issue's model is a superb scratch-built model of the German Jagdpanzer Tiger (P), or "Elefant" in 1:48 scale. This excellent model was constructed by Graham Reynolds of Arcadia, California, and it features fully detailed and operating hatches, including the shell-ejection hatch. The long-barreled 8.8cm Pak 43/2 is ball-mounted, and has full elevation and traverse as did the original. Mr. Reynold's model is camouflaged as it was seen on the Kursk battlefield of 1943 and it is certainly one of the best scratch-built models that we've seen. Mr. Reynold assures us that we will be able to examine more of his work in the near future.



A. F. V. INQUIRY

The purpose of this section is to attempt to answer the questions of interested readers. Questions may be submitted by anyone, and should be sent to the Editor, at the address that appears on the cover. If the answer is urgently needed, please enclose a self-addressed stamped envelope.

Question: Were there any American tank "aces" of World War II.

Answer: In attempting to answer this question, we should explain that the proper research into American combat tank exploits could be a life-long job in itself. To do a proper job of reasearch on this question, one would have to consult the Department of the Army, and gain access to the records and citations for the award of the Bronze Star (with "V" device) and the Silver Star, in order to determine the background and reasons for the award of each medal. The only records of this type commonly available to a person doing research is the listings and citations for the award of the Medal of Honor.

The Congressional Medal of Honor was awarded during World War II. to a number of members of the US Army assigned either to Tank or Tank Destroyer units. It should be mentioned that the CMH was awarded for conspicuous bravery far above and beyond the call of duty (sic..) and not for just doing one's duty. Since the duty of a tanker or tank destroyer crewman was to knock-out enemy armor, it is obvious that the CMH records probably disclose no awards for the "destruction of 25 or more enemy tanks...."

It was also a good deal easier for the crew of a German Tiger or Panther to knock-out 25 or more enemy vehicles than for the crew of a Sherman to achieve the same results. Many US tank crews lost four or more personal tanks before getting out of the Normandy peninsula area. and there seems to have been two common complaints about the Sherman from its crews. First, the Sherman badly needed more armor protection; the front and sides of a Sherman could be easily penetrated by the average German tank of 1944. The Sherman also needed a more potent gun than the 75mm; there are many accounts of 75mm AP shells bouncing off of the frontal armor of German Tigers or Panthers. There were many field solutions to these two problems and we do not have the space here to mention them.

It might prove interesting to our readers to read the citations for the award of the Congressional Medal of Honor to a couple of recipients, who won the award while serving in tanks or in tank destroyers..........

Corporal Arthur O. Beyer, Company C, 603rd Tank Destroyer Battalion. Place and Date: near Arloncourt, Belgium, 15 Jan 45. Citation: He displayed conspicuous gallantry in action. His platoon, in which he was a tank-destroyer gunner, was held up by antitank, machine gun, and rifle fire from enemy troops dug in along a ridge about 200 yards to the front. Noting a machine gun position in this defense line, he fired upon it with his 76mm gun, killing one man and silencing the weapon. He dismounted from his vehicle and, under direct enemy observation, crossed open ground to capture the remaining two members of the crew. Another machine gun, about 250 yards to the left, continued to fire at him. Through withering fire, he advanced on the position. Throwing a grenade into the emplacement, he killed one crew member and again captured the two survivors. He was subjected to concentrated small-arms fire but, with great bravery, he worked his way a quarter mile along the ridge, attacking hostile soldiers in their fox holes with his carbine and grenades. When he had completed his self-imposed mission against powerful German forces, he had destroyed two machine gun positions, killed 8 of the enemy and captured 18 prisoners, including two bazooka teams. Corporal Beyer's intrepid action and unflinching determination to close with and destroy the enemy eliminated the German defense line and enabled his task force to gain its objective.

Private First Class Herbert H. Burr, Company C, 41st Tank Battalion, 11th Armored Division. Place and Date: near Dorrmoschel, Germany, 19 Mar 45. Citation: He displayed conspicuous gallantry during action when the tank in which he was bow gunner was hit by an enemy rocket, which severly wounded the platoon sergeant and forced the remainder of the crew to abandon the vehicle. Deafened, but otherwise unhurt, Private Burr immediately climbed into the driver's seat and continued the mission of entering the town to reconnoiter road conditions. As he rounded a turn, he encountered an 88mm antitank gun at pointblank range. Realizing that he had no crew, no one to man the tank's guns, he heroically chose to disregard his personal safety in a

- Continued on Page 23 -

PRODUCT REVIEW: Otaki 1:35 Scale "Panzer III." by Norb Meyer

It certainly is nice to see someone come-out with a kit of the Panzerkampfwagen III. The unfortunate part, though, is the fact that this kit is a poor attempt. Otaki can manufacture the good kits, if they want to, we're sure, but this kit is far from good. We'll begin our critique from the ground up. The track supplied with the kit is the usual "rot-a-track", and is hardly worth bothering with, at least when compared to the Monogram track standard. The road wheels in the kit will make wonderful sprue, and that's about all that they are good for.... These little devils are cast in one piece, instead of the pair (outside and inside) that they should be. The suspension that should be at least cast into the side of the hull is totally nonexistant. The hull top and bottom fit together like a Spanish Doubloon into a dime Coke machine! The detail on the upper hull is Gross; where hinges are supposed to be, there are just triangular globs of plastic. The rest of the hull is not too bad, but it could have been done much better.

Now, we come to the turret.....this thing looks like a scaled-up Minitank turret. The slope to the sides is incorrect, and the cupola is nonexistant. A very poor effort.......

The only kind word or two that we can say for the kit is that the add-on detail is nice.... If you happen to be building a Panzer III. from scratch, the add-on detail would make your job a lot easier. Seriously, the kit does have some detail that one must have to make an accurate Panzer III., and the kit is worth the price if only for these parts. The hull front plate (add-on) is good, and the angles appear to be very close. By the way, this part will fit very nicely onto the front of the Monogram Panzer IV.! The front driver's plate is an add-on piece, complete with the supplemental add-on armor, and we must say that it's quite nice.

The kit could be made into something quite accurate with quite a lot of extra labor, and a number of scratch-built parts, such as the road wheels. Many parts could be "borrowed" from the Monogram Panzer IV. This conversion would be quite a struggle though, and it would probable be easier to scratch-build the whole darn thing, using add-on parts from both Monogram and the Otaki kit.

It is really a shame that Otaki could be so superb in some areas, and so "rousy" in others.

Wargaming Review: The Complete Firing Table (Continued from Page 10)

dicated by markers of some sort, placed on or near the affected vehicle. A recommendation would be a red card to indicate armament damage and a yellow card to show automotive problems. A black card may be used to indicate kills.

Complicated? Of course it is; but if you're in a hurry (Shudder), or if you want a simple game, here are a few ways to simplify play using the same tables. Ignore the "Crew" and "Maint" sections of the Damage Table, and assume that all damages are "Crew 1 Turn". Even a reservist can keep track of one turn. Assume that all tanks are stationary; this limits the Situation Table to two lines - "Stationary to Stationary" and "Stationary to Hull Defilade". Keep the rest of the table though, someday you may want to try a game with a few extra headaches - the headaches that a tank commander must face.

AFV Inquiry....(Continued from Page 22)

direct charge on the German weapon. At considerable speed he headed straight for the loaded gun, which was fully manned by enemy troops who had only to pull the lanyard to send a shell into his vehicle. So unexpected and daring was his assault that he was able to drive his tank completely over the gun, demolishing it and causing the crew to flee in confusion. He then skillfully sideswiped a large truck, overturned it, and wheeling his lumbering vehicle, returned to his company. When medical personnel who had been summonded to treat the wounded sergeant could not locate him, the valiant soldier ran through a hail of sniper fire to direct them to his stricken comrade. The bold, fearless determination of Private Burr, his skill and courageous devotion to duty, resulted in the completion of his mission in the face of seemingly impossible odds.

Sturmgeschütz-Brigade 236.

by Jim Steuard

Tactical Symbol Sturmgeschutz-Brigade 236.

Sturmgeschütz-Brigade 236. was formed on March 17th, 1943 at the German Army Artillery School at Jüterbog, Germany. It was formed from the 3. Batterie of Sturmgeschütz-Brigade 189. and personnel from Sturmgeschütz-Ersatzabteilung 300. (or Assault Gun Replacement Battalion 300) in Neisse. The first Brigade commander was Hauptmann (or Captain) Rolf Brede, and he and the personnel chose the tactical symbol; a Centaur, half man and half horse, shown prancing on a shield as illustrated at the left.

After the conclusion of training and tactical exercises, the Brigade entrained for movement to the Eastern front. The Brigade saw its first combat near Kuibyschev, defending against superior Russian numbers. After the conclusion of this defensive battle, the Brigade had destroyed 139 Soviet tanks, mainly T-34 types. On July 27th, 1943, Sturmgeschütz-Brigade 236. was mentioned in the official Wehrmacht high command report as having destroyed their 150th enemy tank.

By August 1943, the Brigade was at Mius, serving under the command of the 16. Panzer-Division, and then the 23. Panzer-Division, as armored reinforcements. They were then transferred to SS-Division "Totenkopf" and SS-Division "Das Reich", which were in reserve as a counterattack force. In the fierce fighting with the men of the Waffen-SS, the Brigade suffered heavy losses, especially among officer personnel.

In mid-August, the Brigade was sent to the area around Salarjansk. The Soviets launched an attack east of Dubrovna, with two to three Tank Brigades, on August 26th. The fierce fighting lasted all of that day, and although they suffered heavy losses in men and equipment, the Assault Gun Brigade stood firm. By late afternoon, there were sixty destroyed enemy tanks on the battlefield. Again, the Brigade was mentioned in the official Wehrmacht high command reports for gallantry.

In September 1943, the Brigade was fighting at the bridgehead at Saporoshje, even though the losses of the past month had severely reduced the effectiveness of the unit. On the afternoon of October 14th, the Brigade reported only five combat serviceable assault guns, indicating the low strength. One-by-one, a number of replacement vehicles were received, in an attempt to maintain the status-quo.

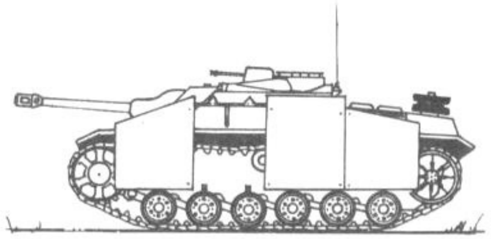
In the large-scale defense battles of early winter, Sturmgeschütz-Brigade 236. was employed in the Dnjepr River swamps. They fought near Krivoi-Rog, Guljai-Polye, Nikolajevskaya, Nasorovka and Busuluk. The fighting was heavy, and German losses were severe. On December 14th, 1943, Hauptmann Fritz Scherer, the commander of the 3. Batterie, was awarded the Knight's Cross of the Iron Cross. Scherer had been awarded the German Cross in Gold, as an Oberleutnant (or 1st Lieutenant) during the fighting in August.

On February 1st, 1944, the Soviet Army launched a large-scale offensive through the Dnjepr swamps, finding the Assault Gun Brigade ready, fighting from well-prepared positions. They were able to inflict heavy losses upon the attacking forces, but their limited strength was not enough to turn the tide. The increasing heavy enemy pressure enveloped the Brigade, and it was left fighting in a pocket partially surrounded by Russian forces. On February 14th, the Brigade was able to report only eleven guns operational. These were soon destroyed in the war of attrition, and the Brigade withdrew from this pocket on foot. They were ordered to return to Germany for refitting.

Sturmgeschütz-Brigade 236. was reformed and rearmed at Altengrabow near Magdeburg, with a new organization and name. They were the first Assault Gun Brigade to be reformed as a Sturmartillerie-Brigade, with the addition of a fourth Batterie, known as the "Begleit" (or Escort) Batterie. This 4. Batterie consisted of supporting infantry, to help protect the vulernable Sturmgeschütz III.'s from enemy infantry and antitank teams.

After thorough training and testing, the Brigade was assigned to Heeres-Gruppe Süd (Army Group South) which was preparing defensive positions near the Rumanian border, behind the front lines. In the area near Jassy, the Brigade was off-loaded from trains, and they moved into defensive positions. Their arrival was not a moment too soon, for the Soviets launched a heavy attack on August 20th, 1944, which broke through the front lines and threatened to envelope the Rumanian border defenses. The Russians were trying hard to reach the Ploesti oil fields. The next week of fighting was very confusing to say the very least. The Rumanian troops that were participating in the defense broke and ran, leaving an open flank, which the Russians soon found. Soviet T-34's flanked the German positions, and the Sturmgeschütz III.'s were soon in hard combat. The newly formed 4. Batterie was heavily involved in providing close infantry defense of the guns, while the guns themselves took a heavy toll of the enemy tanks. However, the Brigade's assault guns were not totally invulnerable, and the Soviet tanks were not totally inaccurate in their shooting. One-by-one, the assault guns of the Brigade were knocked-out, and the surviving crew members joined the 4. Batterie as infantrymen. The Soviet Armies, at this time, also attacked into Hungary, and thus partially cut-off the two German Armies fighting in Rumania. It became evident to the Wehrmacht High Command that the two Armies would soon become totally cut-off and destroyed, unless plans were made for a German breakout. Small German units were ordered to merge together to form Kampfgruppen (or Battle Groups) and prepare to breakout to the west, as the Soviet surrounding ring grew tighter. Hauptmann Brede, the Brigade Commander of Sturmartillerie-Brigade 236., formed one such Kampfgruppe from the remanents of his Brigade, and the group moved west with only one operational assault gun, which was soon lost to the Russians as it provided covering fire.

While German units were trying to extract themselves from the Russian encirclement, a new HKL, or front line, was being constructed in the rear of the combat zone, on the south side of the Carpathian mountains. By September 12th, this new front line was operational, and German units were retreating through the defensive positions. Soon afterward, on September 25th, the remains of Sturmartillerie-Brigade 236. filtered back into friendly positions. They reported a total strength of only 87 men; having lost 520 officers and men and all armored equipment to the Russian encirclement. These remaining troops were soon loaded on a train for movement to the rear. On 10 October 1944, they arrived in Posen, Germany, the home of Sturmgeschütz-Ersatzabteilung 500., the unit that had been ordered to rebuild the Brigade for the third time in its history. Under the command of this replacement unit, Sturmartillerie-Brigade 236. began to reform with new equipment, officers and men.



On November 11th, 1944, a new commander arrived to take command of the reformed Brigade. He was Major Rudolf Kranz. Two days prior, on November 9th, he had been awarded the Knight's Cross, as the commander of Sturmgeschütz-Brigade 249. He was to prove a very able commander.

With the beginning of the new Soviet winter offensive on the Baranov bridgehead, on January 12, 1945, the Brigade was again ready for combat. They were moved by train transport to Rosenberg in Upper Silesia. When the fully armed batteries were offloaded from the trains, they moved directly into combat against Soviet forces. With newly arriving infantry troops, they formed a defensive front on the Oder River. For two months, the Brigade was to hold these positions against heavy Soviet attacks. During this period of time, the Brigade stood firm, holding open a corrider for escaping civilians and military units that were fleeing from Soviet captivity. In numerous towns, such as Gross-Strehlitz and Brieg, the Soviets infiltrated behind the German lines, and there was bitter fighting to dislodge the Soviet infantry from the houses and buildings. German losses in vehicles and men were high.

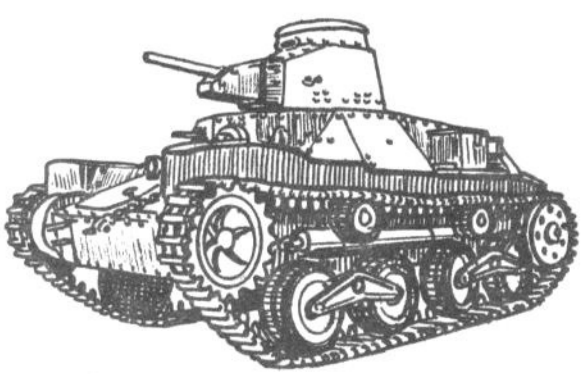
With the beginning of the Soviet large-scale counterattack on March 27, 1945, the Brigade had been forced into a retreat to Ratibor. Even though the assault guns had knocked-out many of the attacking T-34's, the enemy had many more at his disposal, and the Soviets attacked through the snow in mass attacks. On March 28th, Sturmartillerie-Brigade 236. reported that it had destroyed its 499th enemy tank, but that it had almost no operational vehicles left to attack or defend. The remanents of the Brigade were pulled back to Saxony for new equipment.

Shortly after the arrival of new assault guns to replace combat losses, the Brigade was alerted for combat against Russians who had broken through the weakened German lines. The remaining combat service was very confused, as conflicting orders and counterorders sent the different batteries to different defensive locations.

The last combat service of the Brigade came when they were located north of Dresden. The orders arrived that entrained the Brigade for rail movement to Teplitz-Schönau in Czechoslovakia. The Brigade arrived, and was being unloaded, when the surrender was announced. Most of the men and officers immediately moved back over the border mountains into Saxony in the hope of avoiding Soviet captivity. They had fought the Russians too long to trust the kind of prison camp offered by the advancing Red Army. Most of the Assault Gun Brigade was able to surrender to Americans.

Banzai Tank Attack .... (Continued from Page 7)

tanks with 7 rockets. Pvt. Robert Reed got 4 with 4 rockets, and with no more rockets, climbed on a fifth tank and dropped a hand grenade down the turret. Some tanks stopped or were disabled, but continued to fire. Most tanks made an effort to breakthrough. They were hit again and again until they burst into flames. Colonel Goto was killed. Tanks that lost their commanders and guides to Marine fire seemed to wander around aimlessly. Some turned in circles, stalled in their own ruts, or bogged down in swamp ground. Those that broke through headed towards the beach, getting hit again by by-passed Marines turning around in their positions. Riflemen and machine gunners riding on the tanks shot up Marines as they rolled past. Sgt. Dean Squires killed a tank commander and then tossed a satchel charge of TNT up into the open turret as the tank rolled by. A pair of tanks crushed two 60mm mortar positions. Some tanks got as far as the Marine Tank Platoon and were quickly destroyed. One tank penetrated as far as the 6th Marine Regiment CP, where 75mm halftracks hit it and set it on fire.



TYPE 95 LIGHT TANK "KYU-GO"

The other 75mm halftracks arrived on the battlefield as dawn broke, and they blasted every derelict Japanese tank until it either burned or was totally destroyed. Only a dozen Japanese tanks had retired from the fight; six mediums and six lights. The last tank was sighted as it climbed up the winding road on Hill 790. Naval gunfire was called-in, and five inch salvos from a destroyer set it afire. In the morning, Marines attacked, closely supported by a Platoon of Shermans, and mopped-up the Japanese survivors.

Exactly how many tanks had been knocked-out by bazooka men, by 37mm guns, by 75mm halftrack gun fire or by tanks could not be determined. Many tanks had been hit by the fire of several weapons, and were claimed by more than one unit. More than 30 Japanese tanks had been lost, and these losses were irreplaceable. The last tank on Hill 790 burned with a tall black column of smoke for the rest of the day, marking the graveyard of the 9th Tank Regiment, and the first large Japanese tank attack of the Second World War.

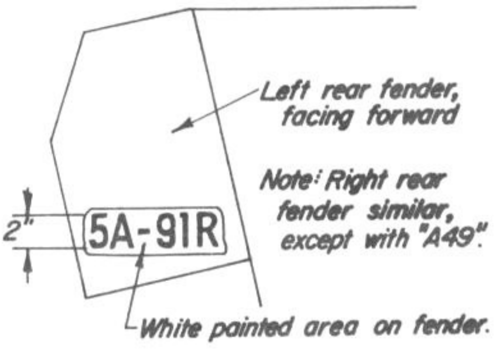
Color 'n Camouflage - The M-8 Armored Car in Italy (Continued from Page 13)

the right rear fender in an identical fashion.

It is interesting to note that no markings were applied to the turrets of M-8's; all markings were painted on portions of the hull. Of course, the insides of the M-8 were so crowded that the crew was practically forced to carry their personal baggage hung on the outside of the turret, and almost all photographs of these vehicles show considerable baggage in the form of packs, sleeping bags, and rolled camouflage nets festooned from the turret and rear hull sides.

The 91st Cavalry Reconnaissance Squadron was an unusual and proud unit that accomplished several distinctive assignments in addition to the famous linking-up between the allied forces at Salerno and Anzio. The 91st Cavalry led the advance up the Italian peninsula, serving as flank security, or advance guard, or acting as route reconnaissance for such units as the US 3rd Infantry Division, US 34th Infantry Division and US 10th Mountain Division. Operating as a force under control of Fifth Army, they were attached at various periods to II. Corps, or to IV. Corps. They fought against the elite Hermann Göring Panzer Division, and 29. Panzer-Grenadier-Division, as well as other mobile forces of the German Wehrmacht. In 1945, as the war was ending, the Squadron was the first unit of the US Army to enter Milan, Italy, which they found under control of Italian partisans. They were the senior recon unit in Italy......

Unit Identification Markings (Rear)


Left rear fender, facing forward
Note: Right rear fender similar, except with "A49".
2"
5A-91R
White painted area on fender.

Marine Tanks in the Pacific (Continued from Page 15)

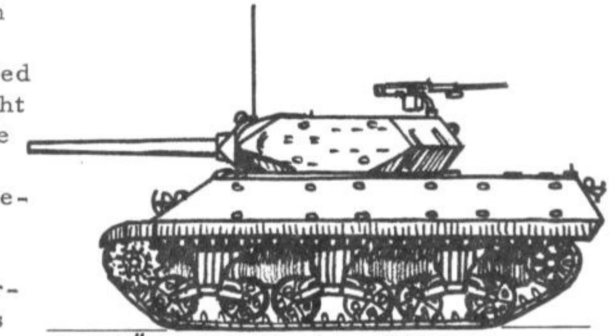
corpsmen and patients at the division's hospital grabbed weapons and held-off attackers until a scratch force of tankers and other available men arrived and drove the Japanese back.

Another large attack formed on the 9th Marines' front; the Marines were exhausted and nearly out of ammunition after a long day of fighting. A platoon of tanks loaded with ammo had been dispatched before dark, and it arrived just as the Japanese began attacking. The Japanese made 7 determined attacks, but could not breakthrough the strengthened Marines.

On the next day, mopping-up operations continued all morning long. The Japanese had staked everything on the big Banzai attack and it had failed. Over 3500 enemy troops were killed.

The Marine Brigade's attack on Orote started early on July 26th. The tanks followed directly behind the infantry and gave covering fire. The Japanese had mined with aerial bombs, and then covered the area with machine gun fire from concealed pillboxes. The tanks set-up a base of fire for riflemen, but the enemy opened fire with mortars and pinned-down the assault. The tanks opened fire and silenced enemy automatic weapons long enough for the Marines to crawl back. It took nearly all day to use artillery to silence the enemy mortars. Heavy artillery preparations the next morning, with smoke, allowed personnel to clear paths through the mine fields for the tanks. The infantry guided the tanks to positions where they could blast enemy emplacements. Bitter fighting continued, slowly driving the Japanese back. Cornered defenders included naval units. A lone naval officer attacked a tank with his Samurai sword. A column of forty sailors, led by an officer carrying a large flag marched down the road into the fire from a Sherman. The few survivors scattered. Most of the fighting, though, had been much harder, and a number of tanks were completely out of ammunition.

The next morning, the Brigade resumed the attack. Tanks were busy against the bitter resistance of dug-in Japanese in dense undergrowth. A tank-infantry attack was launched in the late afternoon; 4th Marines employed all available company tanks, along with a platoon of light tanks and six M-10 Tank Destroyers borrowed from the Army. This mass armor effort broke through a line of 250 emplacements, and the infantry following closely behind the tanks swept forward nearly to the airfield.


3" Gun Motor Carriage M-10 on Guam

Next day's attack was again led by Marine tanks and borrowed Army armor, and it drove across the airfield and herded the last of 3400 defenders onto Orote's western tip. Most of them fought to their death, or committed suicide; only three of the defenders surrendered to Marines on Guam. It took four more days to drive the last Japanese from their caves and holes. Finally, a patrol was sent to the end of the peninsula. They came upon a small forlorn soldier in an oversized uniform, who was willing to surrender. The puzzled Marine interpreter asked him why he surrendered. "My commanding officer ordered us to fight to the last man," he explained. "I am the last man."

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